

Advances in the Study of

AGGRESSION

Volume 2

Edited by
Robert J. Blanchard
D. Caroline Blanchard

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Edited by

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Preface

This volume, the second in *Advances in the Study of Aggression*, is, like the first volume of this serial, topic oriented rather than reflecting the methods, approaches, or interests of any single discipline. It differs considerably from the first volume, however, in being more directed toward—if not immediate application to human problems of aggression control—at least the possibility of some future application in this area.

Such a description seems cautious and indeed the appearance is not deceptive. Although the volume is overtly concerned with a basic and important social issue, it stems from research, each article representing the work of either a social or a biological scientist. Although the present contributors vary in many dimensions, including positions on some of the issues discussed, one dimension on which there is relative uniformity is a belief that research-based information is crucial to the successful delineation and solution of this enduring human problem.

Another relatively predictable area of unity amid the diversity of approaches and specific aggressive phenomena under study is the view that aggressive phenomena, and their causes and optimal control agencies, are very complex. Many of the articles deal with aggressive phenomena which are somewhat circumscribed (cf. Linz *et al.*, on sexual violence and exposure to sexual/violent media), and the violence limitation techniques they suggest are appropriately specific. In fact, the nearest any article comes to advocacy of a general technique for control of aggression is our own article on negative consequence; and in this case, readers have our personal assurance that we are not promoting punishment as a global “cure-all” for aggression. What these articles do suggest is the dependence of appropriate remediation on proper evaluation of the complexity of a host of interactive variables and phenomena in aggressive behavior: behaviors of victims and perpetrators; experience of the aggressive person antecedent and consequent to the aggressive event; pharmacological agents such as alcohol; features of the stimuli and situations which occasion and support aggression; and culturally based aspirations and expectations of individuals and limitations on access to social opportunities for these same persons. Viewed in this

fashion, aggressive behavior becomes almost a model for any important human action pattern. It requires analysis on many levels—biological, experiential, and cultural—to provide sufficient detail for a dynamic process model useful in suggesting optimal intervention points and methods.

Finally, there is one less predictable (possibly even surprising) commonality to emerge from these articles: the importance of cognitive factors in the control of aggression. While the study of cognition is one of the recent growth areas in psychology, none of the present authors is primarily a cognitive psychologist (nor, for that matter, are they all psychologists of any sort). Yet those studying primarily pharmacological and situational variables influencing aggression (Taylor) as well as those involved with a range of complex cultural and social-organizational variables in the determination of aggression (Short) mention the importance of one or another variety of cognitive control system. The view that cognitions can control aggressive behavior may perhaps be seen most overtly in the paper by Feshbach and Feshbach, on the teaching of fantasy and imagination skills to reduce aggression, and in the article by Linz *et al.*, where information counter to a message received through the media is shown to be capable (when given in the appropriate emotional context) of changing attitudes toward sexual violence. While Novaco deals not with aggression but with its frequent precursor, anger, he too is concerned with the complex interaction of cognitions and moods which characterize this emotion. And, lastly, we have certainly tried to suggest the importance of cognitive as well as emotional processes in mediating the effects of punishment.

The recurring theme that cognitive factors are important in the control of a variety of aggressive behaviors should not be taken as a denegation of the role of emotions in the same context. In a sort of parallel to their concern with cognitive factors, the same articles tend to hint at the complexity of emotional processes involved in aggression and its control. Anger, though a potent (indeed, often too potent) emotion, appears to be to some degree inhibited or reduced by not one but many other emotional states, including fear, guilt, and joy. These emotions, in turn, interact with specific cognitive features of the social milieu to form a dynamic process which scientists have hardly begun to describe. One hopes that the understanding of this interactive process will become a central feature of the study of behavior in this decade, providing new and valuable insight into both the etiology and the control of aggressive behaviors.

Robert J. Blanchard
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Anger as a Clinical and Social Problem

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I. INTRODUCTION

Anger and aggression are commonly viewed as detriments to personal and community well-being. The destructive nature of aggression makes its detrimental character obvious but, while there is considerable knowledge about aggressive behavior, both in naturalistic and in controlled laboratory settings, much less is known about anger. Systematic studies of the nature of anger (Averill, 1983) and of clinical interventions for anger problems (Novaco, 1985) have begun to come forth, yet we are just beginning to understand the involvement of anger in physical and psychological distress.

Experienced as a transient emotion, anger is part of the human fabric and has no automatic status as a problem. However, as a recurring condition, the arousal of anger is problematic because it is an antecedent/activator of aggressive behavior and because it can impair psychological adjustment and personal health. Some serious social problems, such as child/spouse abuse and various forms of intergroup conflict, are clearly mediated by anger and the inability to manage anger arousal. Beyond its ties to aggressive behavior, recent research has linked anger to impairments in cardiovascular functioning (Chesney & Rosenman, 1985) as well as a number of other physical illness conditions.

This article sets forth a view of anger as a clinical-social problem. As background for this analysis, I will start with an overview of conceptions of anger found in theories of human aggression, where anger often has been neglected. Theories of aggression have primarily been psychological in nature. Psychological scholars have attended to anger more than

sociological theorists, who are concerned with social structure rather than personal processes. However, there are aspects of sociological thought, particularly that pertaining to deviance, which have importance for understanding anger.

Following this theoretical overview, the role of anger in problems of aggression and violence is examined. Anger is clearly implicated in violent crimes of murder, assault, rape, child abuse, and spouse abuse. The subject of child abuse will be used to illustrate variations in levels of analysis for understanding anger determinants. Across all forms of analysis, it is unmistakable that a large proportion of aggressive acts, whether impulsive or premeditated, can be viewed as anger driven. Both individual and collective violence can be mapped for anger involvement. The issue of catharsis, often not addressed as a matter of clinical relevance, will be given attention in this regard.

The involvement of anger in disturbances of psychological well-being has not previously been specified. While there is no diagnostic category for anger disorders, anger is a prominent part of a number of psychiatric dysfunctions. Anger has also been linked in recent research to physical health problems, although coverage of that topic is beyond the scope of this article. The mechanisms for these impairments to health and functioning can be understood through theories of human stress, and a view of anger within this perspective will be set forth. In this analysis, anger is understood as an emotion-action complex that has several stress-related dimensions, these being (1) as a stress reaction or outcome of stressor exposure, (2) as a component of a stress coping style with functional deficiencies, and (3) as an internal stressor that causes wear and tear on the organism.

II. CONCEPTIONS OF ANGER IN THEORIES OF AGGRESSION AND VIOLENCE

A. Psychoanalytic Theory

Until recently, the concept of anger has taken a backseat to that of aggression. The extensive research conducted on human aggression in psychological laboratories in the 1960s and 1970s virtually excluded anger except as a precondition induced to facilitate aggressive behavior. Behavioristic traditions favored the study of observable action over subjective experience. Consequently, anger received little attention. However, this neglect of anger as subject matter also occurred in the psychoanalytic literature. Prior to the work of Redl and Wineman (1951,

1952), anger was a sparse topic in psychoanalytic writings, except as part of general discourse about aggressiveness and impulse frustration. In fact, one rarely, if ever, finds the word "anger" in the subject index of psychoanalytic books prior to the last decade.

From a historical standpoint, this dearth of attention to anger is surprising. G. Stanley Hall (1899), who hoped to advance the study of anger beyond the foundation of the James–Lange theory, wrote an extensive linguistic and conceptual analysis of anger and reported the results of a large-scale survey (over 2000 returns). It was his intention to shift the psychological analysis of anger from philosophical to empirical inquiry. Although this eminent psychologist wrote that "psychological literature contains no comprehensive memoir on this very important and interesting topic" (Hall, 1899, p. 56) and set out to stimulate such work with his report of rich accounts of anger and provoking circumstances, the field showed little interest in the topic. Nearly two decades later, Richardson (1918) published a monograph on anger that was based on introspective experiments. Curiously, his work emphasized the role of cognitive processes in the stimulation of anger, yet no body of research was forthcoming. Similarly, Goodenough's (1931) fine monograph on anger in young children did not prompt the systematic work in this area that might have been expected.

When Dollard, Doob, Miller, Mowrer, and Sears (1939) sought to build an empiricist framework for the study of aggression, they were guided by Freudian thought. Psychoanalytic theory does not provide a coherent view of anger, but it is important to identify and acknowledge its contributions. The two key aspects of Freudian theory that bear upon anger are (1) the concept of the death instinct, and (2) conceptions of emotional development and impulse control.

The death instinct concept, initially set forth in "Beyond the Pleasure Principle" (Freud, 1920), further elaborated in "The Ego and the Id" (Freud, 1923) and in "The Economic Problem in Masochism" (Freud, 1924), was extrapolated fully in "Civilization and its Discontents" (1930) where Freud asserted his provocative, negativistic thesis of the innate savageness of man. Anger is given no explicit mention in this theoretical area, except by association to aggression, but Freud's discussion of ego mechanisms for handling the death instinct had important implications for psychodynamic anger management prescriptions.

Freud theorized that the death instinct can be directed outward as a way of diverting its self-destructive aims—thereby accounting for aggressive behavior. The classical psychoanalytic position on aggression is that "outward aggression is an expression of the death instinct in the service of Eros," and that "any restrictions of aggression directed out-

wards increase self-destruction" (Freud, 1930, p. 66). It is this postulate that is at the root of the psychodynamic view of depression as anger turned inward (which will be taken up in a later section), and it was also the basis for "ventilationist" ideas of how to handle anger (e.g., Rubin, 1969), which overstate the adaptive value of anger expression and minimize its disruptive and destructive sequelae.

The Freudian death instinct concept was also fundamental to Menninger's (1938) understanding of aggression and suicide (cf. pp. 71–73 for a succinct accounting of his elaborate analysis). Menninger provided many clinical and journalistic stories of persons who "boil over with rage" and eventually kill themselves or someone else. Never attending to anger explicitly or even using the word, he viewed the destructive impulses as inherent psychological and biological realities. However, rather than promote the free expression of emotion as therapeutic, he emphasized the *neutralizing* influences of the life instincts. This was an alternative ego mechanism in Freud's theory for handling the death instinct—fusion with Eros (Freud, 1923). It was thought that the innate destructive forces could be disarmed or neutralized by erotic or constructive tendencies. In addition to the neutralizing forces, Menninger (1938) discussed the mechanism of *displacement*, particularly as he wrote about treatment techniques:

We see a patient who has belabored and berated himself for months, insisting that he is too unworthy to live and begging to be permitted to kill himself, gradually turning his vituperations onto the hospital or its doctors and nurses, or perhaps on his anxiously waiting relatives. Such an outpouring of hate is unpleasant but it is vastly encouraging; it only remains for the recovery of such an individual that these belligerencies be displaced to still more appropriate objectives. Usually there are plenty to be found—it requires some vigorous fighting . . . to maintain one's place and peace in the world. [p. 371]

One can see the themes of the classic position in this passage, which is followed by a discussion of the value of sport, work, games, and humor as opportunities for the vicarious release of aggressive energy. Menninger saw the importance of anger expression, but saw it only as a first step in recognizing destructive forces that have the self as their ultimate victim.

The second aspect of Freudian theory bearing on the conception of anger concerns emotional development and impulse control. Freud asserted that instinctual drive forces pressed for immediate discharge or gratification (pleasure principle) and that neuroses developed in part as a result of libidinal satisfaction being blocked or frustrated. In his early theorizing, Freud linked neuroses to conflict between the sexual instinct and the ego instincts of self-preservation which were governed by the

reality principle (Freud, 1924). The frustration of libidinal impulses was claimed to arouse hostility (therefore, the frustration-aggression hypothesis). The key exemplification of this is the Oedipus complex. Among psychoanalytic writers who took exception to Freudian theory was Horney (1939), who thought that Freud overemphasized libidinal frustration in the etiology of neuroses.

The typical conflict leading to anxiety in a child is that between dependency on the parents—enhanced by the child's feeling of being isolated and intimidated—and hostile impulses against the parents. Hostility may be aroused in the child in many ways: by the parents' lack of respect for him; by unreasonable demands and prohibitions; by injustice; by unreliability; by suppression of criticism; by the parents dominating him and ascribing these tendencies to love; by misusing children for the sake of prestige or ambitious goals. [pp. 82–83].

Whether it is libidinal forces that are conjectured to be blocked or a more diverse range of needs and constraints that is thought to be operative, it has generally been observed that in the early years of life, anger arises in conjunction with the thwarting of wants and desires.

Menninger (1942) portrayed the early years as a period of frustration for the child centering around problems of feeding and toilet training, and he flatly asserts that "the human child usually begins his life in anger" (p. 9), citing neonatal observation studies (e.g., Blanton, 1917; Dennis, 1934) which suggest that the newborn's cry is one of wrath. Colloquial discussions of the "terrible twos" and temper tantrums of young children are buttressed by clinical and empirical accounts. In the psychiatric literature, for example, Snow (1972) writes, "In the second year, the major emotional problem area with which the individual must come to terms is that of impulse and behavior control and the anger that derives from being controlled in a one-to-one relationship. This handling of anger is immensely important in terms of ego development" (p. 91). Correspondingly, Goodenough (1931), in a behavioral observation study of young children, found that overt manifestations of anger reach a maximum during the second year of life.

The impulse strivings and ego development concept of Freud vis-à-vis anger are best illustrated in the works of Redl and Wineman (1951, 1952). Their theoretical framework begins with the idea of two central personality systems: an "impulse system" and a "control system." Their view of anger and aggression is a hydraulic model incorporating notions of urges/impulses/pressures and their potential regulation by ego controls:

Whether one child hits another over the head may be viewed with profit in a manner which bears considerable similarity to our illustration of the water reservoir, if we can force ourselves to forget for a moment the obvious dissimilarities in the picture. His

hitting the child may mean that the trouble lies with his impulsivity. His reality perception, his feelings for what is fair and decent, may be as well developed in him as in the next child, and his behavior may have been due to an onrush of sudden impulsivity which "overran" his controls. On the other hand, it may be an entirely different case. He may not suffer from any such present or case history conditioned upsurge of aggression at all. He may just feel a mild urge to hit somebody, an urge no more intensive than that of another child at any one time. Only, it so happens that this youngster has no "controls" at all. The part of his personality which is supposed to screen and check his impulses before they are allowed into open action may be deficient, not functioning, or closed for the week-end. [1951, p. 71]

The analysis of anger disorders, from this perspective, focuses on the breakdowns of the control system. Problems of frustration tolerance are attributed to the inability of the ego either to manage impulse intensity at the outset or to handle the disruptive effect generated by temporarily withstood impulse blocking. By specifying the multiple functions of the ego (they list 22 with apparent redundancy), Redl and Wineman sought to improve understanding of disturbances underlying anger/aggression disorders. Moreover, they identified ego defenses for nonacceptable impulsivity that they term "tax evasion" strategies or "alibi tricks" which represent rationalizations or justifications for behavioral transgressions.

At this point I will turn to behavioristic analyses of anger, leaving the psychoanalytic perspective without having addressed the topic of catharsis. While the catharsis doctrine on the therapeutic value of the discharge of pent-up emotion is central to psychoanalytic thinking about anger and what to do about it, behaviorally oriented psychologists have given much scientific attention to this topic. Therefore, it will be discussed as a separate topic subsequent to the next section.

B. Behavioristic Theory

Among behavioral psychologists, anger has primarily been studied in conjunction with research on human aggression, and in this context it has been a secondary phenomenon. That is, anger was an arousal state activated so as to create a precondition for aggressive behavior which was the primary research focus. Similarly, attention has been given to anger in the study of emotion in work inspired by Tomkins (1962, 1963) such as that of Ekman, Friesen, and Ancoli (1980) and Izard (1977), but this body of research has primarily been concerned with facial expression, and anger is only one of the many emotions studied. While Izard gives significant coverage of anger in his analysis, it is curious that Tomkins (1963) virtually ignored it. The present article's focus on anger as a problem condition takes us away from this line of work and other

research on the intrinsic properties of emotion. Among those who study the nature of emotion, Averill's (1983) work on anger is unusual and will receive attention below.

For organizational purposes, I will first deal with studies of anger that have used self-report and structured diary methods, which include the work of Averill, and then examine laboratory-based research which followed from the frustration-aggression theory. For the most part, this organization corresponds to historical sequencing.

1. Anger as Studied from Subjects' Reports

Behavioral research began with Hall (1899) who sought to advance psychological work beyond the predominantly philosophical analyses that had been made up to that time. To this end, he distributed a questionnaire in a national mailing that produced 2184 returns. In this questionnaire, he asked for descriptions of sensations, symptoms, overt acts, mental correlators, cognitive constructions, and palliatives associated with anger reactions. He distilled the responses into various content categories: causes, physical manifestations, "vents," reactions, control, and treatment. Despite this rich account of anger provided by Hall, there was no programmatic work that followed. Some years later, Hall (1915) wrote about the applicability of Freudian methods to the study of anger. He discussed anger's dynamic properties, including aspects of displacement, sublimation, and dream involvement. That second writing, however, is altogether brief. It seems that Hall wanted to induce psychologists to go beyond introspective methods in studying anger, giving attention to unconscious factors.

Two decades later, using a very different methodology, Richardson (1918) published an introspective study of 12 people over a 3-month period. Seven of his 12 people were experienced introspection subjects. Richardson had his subjects observe the conscious period preceding the emotional arousal, the development, diminution, and dissipation of anger, and the conscious period following the emotion's termination. They were instructed to give particular attention to "the behavioral side of consciousness." His writings on the dissipation of anger and on conscious aftereffects are intriguing. Like his functional analysis and his typology of anger, these introspective accounts are rudimentary, but they are informative for therapeutic interventions.

The studies of Hall (1899) and Richardson (1918) were descriptive accounts of the reports of their subjects gathered by two very different methodologies. A step beyond this descriptive analysis was taken by Gates (1926), who provided a statistical report of the data gathered from

51 female undergraduates. Although her statistics are indeed descriptive and not inferential, her study is a step toward nomothetic analysis. Her subjects recorded all their anger experiences for 1 week. In conjunction with each experience, they rated anger intensity on a five-point scale, recorded time of day, proximity to mealtime, and state of health at the time, as well as responses, impulses, and aftereffects. They also did an initial overall self-rating of anger proneness, which turned out to correlate (not computed) with frequency reports and intensity ratings during the subsequent self-monitoring study. Among the results of this study are that the reported weekly frequency was 2.85 occurrences, that the time of occurrence was often before meals, that for most occurrences anger dissipated in a 20-minute interval, and that thwarting of self-assertion was a common cause of anger, especially among high-intensity occurrences.

A much larger step toward normative data was taken by Goodenough (1931) in a fine monograph concerning anger among young children. Done at the University of Minnesota Institute of Child Welfare, the study was conducted by obtaining mothers' observational records of the anger experiences of their children. Forty-five mothers participated, ranging in their recording from 1 week to over 4 months (34 subjects made observations for at least 1 month). Goodenough found that overt manifestations of anger reached a peak frequency during the second year of life (the sample was cross-sectional), averaging .14 outbursts per hour, then dropping off rapidly in ages thereafter (reaching .06 per hour at ages seven and eight).

Duration of anger outbursts changed very little with age, and more than two-thirds of the outbursts ended in 5 minutes time. This is shorter than the interval reported by Gates. Also, Goodenough found that the child's health was related to anger occurrences, as temporary health disturbances were associated with more frequent outbursts. In contrast, Gates found no correspondence between bodily condition and intensity of emotion. On the other hand, Goodenough found, in concurrence with Gates, that anger tended to occur shortly before meal hours. Beyond these parametric recordings, Goodenough also gathered interesting data on methods of control used by parents, but the results are too long to summarize here. One noteworthy set of findings, however, is that parents yielded to the child's angry outburst more frequently on days of ill health and that yielding ("giving the child his own way") is reported more frequently for children who have many outbursts than for those who have few.

A study of undergraduate students at Berkeley was done by Stratton (1926, 1927), who used a highly structured diary pertaining to 3 days of

self-observation over a weekend.¹ He provided his subjects with extensive categorizations of situations of anger and a six-point response gradient having elaborate verbal anchors at each intensity point. Extrapolating from Stratton's data, anger frequency is about two times per week. He also found low inverse correlations between anger and academic performance. Unfortunately, Stratton's presentation of his data is less than optimum, and his statistical analyses are inadequate for what appears to have been a rich data set. His research protocol, however, is in contrast an impressive self-report instrument for coding anger experiences. It is unfortunate that the relationships between anger reactions and illness history that he verbally summarizes in his 1926 report are not accompanied by data presentation for the 900 persons he indicates were studied.

The study by Gates (1926) inspired Meltzer (1933) to do a comparable controlled diary study with 93 male and female Oregon college students. These subjects recorded 393 anger responses over a 1-week interval, and Meltzer compared these data to those of Gates, obtained from New York college women at Barnard. Meltzer found that men reported 40% more anger experiences than women and that women were more frequently angry in response to noninterpersonal events. Meltzer construed the motivation for anger in terms of the thwarting of self-assertion. On the average, anger duration was reported as 15 minutes, which is roughly comparable to that of Gates sample, however, there is considerable variability in the duration measure for both of these studies. This intersubject variability in anger duration is clearly mapped in Averill's (1983) presentation of his data across several studies, with duration categories ranging from less than 5 minutes to greater than 1 day. Averill's sound interpretation is that the angry episode can be conceived as a disposition to respond, which may not be manifested continuously over a time interval.²

The Oregon subjects differed from the Gates' Barnard subjects in temporal incidence. Friday and Saturday were days of highest anger incidence for Gates' sample, whereas for Meltzer's Oregon sample, the high

¹ Stratton's presentation of his data and description of his method leave much to be desired and discerned. Both reports need to be read to understand his procedure, and even then some of his analyses are unclear.

² Averill's concept of anger as a social role leads him to this view of the "angry episode," but he thereby gives *duration* a different use as a parameter of anger than is my own inclination. When he describes the episode as a disposition to respond, which may or may not be manifested continuously during the interval, his social role perspective is salient. Alternatively, the person's state during this hypothetical interval could be described as hostility when anger is not manifest as a subjective effect. This differentiation of anger as an emotional state from hostility as an attitudinal disposition was made by Buss (1961).

periods were Monday and Tuesday, if the subject belonged to a fraternity or sorority, and mid-week or weekend if the subject was an "independent." Thus, temporal patterns of anger were associated with residential and social network conditions.

Interestingly, the psychological condition of the subjects *before* the anger-arousing situation was often (40%) reported to be a state of disequilibrium (e.g., tired, sleepy, hungry, headache, nervousness, worry, etc.). Further, two-thirds of Meltzer's subjects reported unfavorable aftereffects of the anger reaction (feelings of disgust, discouragement, trembling, distraction, forgetting, nervousness, etc.) which were construed as dissociative states. These reports are in line with my understanding of anger as a stress-related phenomenon, both in terms of its antecedent organismic and cognitive conditions and its subsequent effects.

Another sample of Barnard College women was studied by Anastasi, Cohen, and Spatz (1948), who also used the controlled diary method, but with some modifications to the technique of Gates (1926) and Meltzer (1933). The diary reports were anonymous, and the 38 subjects were asked to record instances of anger for recalled, present, or anticipated situations. Over 90% of the recorded anger reactions occurred with regard to present events. Anastasi *et al.* (1948) report an average weekly frequency of 15.7 anger reactions, which is inconsistent with virtually all other empirical studies, including some ongoing epidemiological research by the present author in Los Angeles County. The magnitude of the discrepancy (4 $\times$) suggests that methodological factors contributed to this result. The small sample, obtained from the same college course, is a serious limitation. No intensity ratings were obtained, so it is unknown what the data reflect about the degree of arousal experienced by the subjects. The subjects in this study had also recorded fear incidents during the same 1-week interval, but it is unclear how this might have influenced the high frequency rate. Anastasi *et al.* (1948) found that anger was most often associated with "thwarted plans" (52%) and that it was most commonly activated by some other person (46%). Nevertheless, it is hard to understand how female undergraduates at Barnard College in 1947 could experience anger nearly 16 times per week on the average.

The study of normative patterns of anger which received early representation by these little known investigators was advanced considerably by Averill (1982, 1983). Averill conducted multiple community and college sample studies which mapped normative data on various components of anger episodes, including background conditions, targets, objectives, intensity, duration, perceptions, continuing reactions, and also

responses to the anger of others. Beyond these exceptional studies of what Averill called the "everyday experience of anger," he set forth a theory of anger that differs markedly from other thinking in the field.

Averill views anger as a socially constituted syndrome, a transitory social role governed by social rules. His "constructivist" viewpoint emphasizes the idea that the meaning and function of emotions are primarily determined by the social systems in which they occur and of which they are an integral part. Emotions are distinguished from other social roles by their intentional objects (which involves cognitive appraisals) and because they are interpreted as *passions* rather than actions. That is, emotions are interpreted as something that happens to one rather than something that one does. This aspect of emotion as passion is linked by Averill to the involvement of biological systems and the appraisal of their activation.

Averill's (1983) book on anger is a thorough, scholarly analysis covering historical, philosophical, legal, and contemporary scientific literature. His view of anger as a rule-governed syndrome is both appealing and persuasive. In my own functional analysis of anger (Novaco, 1976), there is recognition of the dramaturical dimension of anger as a role-defined phenomenon, designated as a "promotional" function. This was inspired by the work of Goffman (1959) on the presentation of self. The idea was that anger, as an affect-action complex, can function to orchestrate an impression or image of the self for the eyes of others or for one's own self-image. However, Averill's analysis is exceedingly more complex along these lines and is articulated with relevant biological and psychological systems.

From the standpoint of maladjustment or psychopathology, Averill's view of anger does not inform us about anger as a problem condition. That is, the elements of his model or perspective do not provide for an understanding of anger as *psychological disturbance*. Similarly, there is no direction for remedies of anger-related disorders. Only a few pages in his book are concerned with the negative or problem aspects of anger ("Anger Gone Awry," pp. 335-339). This is because Averill intends to emphasize the positive or functional aspects of anger within social systems, and he is quite inclined to see anger as a form of problem solving. This matter of emphasis, however, does not provide direction for therapeutic intervention strategies.

2. Anger in Laboratory Analyses

The landmark publication in the behavioral analysis of aggression was the volume "Frustration and Aggression" by Dollard *et al.* (1939). These authors were inspired by Freudian ideas and sought to translate psy-

choanalytic propositions into a learning theory framework. Dollard, for example, found value in psychoanalytic concepts in his earlier anthropological work on the "Negro caste" (Dollard, 1937) and in explaining the game of verbal taunting known as "the dozens" that was common practice among lower class youth (Dollard, 1939). Fundamentally, the Dollard *et al.* (1939) volume is based on the Freudian hypothesis that aggression is a primordial reaction to the blocking of the pleasure principle. They took a bold step of acknowledging the Freudian contribution while casting the hypothesis into operational language favored by empiricists. However, they consistently ignored *anger* in conceptualizing the functional relationships between provocation events, associated circumstances, and harm-doing actions. In elaborating their thesis on aggression, they spoke not of "anger" but of "instigation to aggression." As a result, research paradigms were shaped which provided little understanding of anger as a primary phenomenon. That course of events was also surprising in view of the fact that an important book on aggression (Buss, 1961) gave considerable attention to anger.

A major reformulation of the frustration-aggression hypothesis was done by Berkowitz (1958, 1962, 1964), who proposed that *anger* and *interpretation* mediated the frustration-aggression relationship, hypothesizing that these variables "intervene between the objective situation and the individual's reaction to it" (1962, p. 46). Berkowitz used "anger" in lieu of "instigation to aggression," arguing that the neglect of the emotional state of anger was a notable omission by Dollard *et al.* The presence of anger, coupled with aggressive cues associated with the anger instigation, was thought by Berkowitz to determine aggressive reactions. Oddly, although Berkowitz (1962) argued for a greater focus on anger as a central mediating variable, relatively little attention was given to anger in the remainder of his important book after his discussion of frustration-aggression propositions.

Feshbach's (1964, 1970) approach to aggression also reflected the positivistic bias that resulted in the exclusion of anger as a primary research topic. Feshbach held that an intervening variable, "aggressive drive," which he specified in Hullian terms (a mediating response-drive stimulus), motivated aggressive behavior. He distinguished anger from aggressive drive, which was said to be facilitated by anger. Hence, the motivation for aggression was ascribed to a hypothetical condition having no organismic or phenomenological referents (according to Hull-Spence axioms). This, unfortunately, directed investigations away from the examination of internal states (*viz.* anger). Similarly, Bandura's (1973) social learning theory of aggression relegated anger to a secondary position of importance. He adopted a general arousal model which

asserted that nearly any source of emotional arousal increases the probability of aggression when conditions are present that dispose people to behave aggressively.

Conditions of arousal or excitation, as important determinants of aggression, received considerable emphasis from Zillmann (1979), whose concept of excitation-transfer (Zillmann, 1971, 1983; Zillmann & Bryant, 1974) is very important for understanding anger as a stress-related phenomenon. Zillmann (1979) took issue with Berkowitz's concept of aggressive cues, arguing that the associative linkages are inadequately mapped in the Berkowitz theory and that empirical support for the model was not strong. Zillmann proposed a three-factor theory to account for hostility and aggression as emotional experiences. In his theory, there are three principal components of emotional state: dispositional, excitatory, and experiential. The first is a response-guiding mechanism (skeletal-motor system), the second a response-energizing mechanism (sympathetic nervous system), and the third an awareness and corrective mechanism (cognitive system). The excitatory component refers to sympathetic excitation (Cannon's "fight or flight" response) arising from conditions of endangerment and varying proportionately with the intensity and immediacy of the endangerment. He views *annoyance* as a motivator of a aggressive behavior as an archaic excitatory reaction with evolutionary links to the survival value of vigorous motor activity. Annoyance results from conditions of endangerment, recognized as threats to well-being, which evoke both excitatory reactions and motor responses. The endangerment may be an immediate experience or anticipatory.

The differentiation of anger and annoyance is not so clear from Zillmann (1979), but his idea seems to be that anger is an appraisal of an experiential state, an appraisal resulting from motor reaction tendencies to act on annoyance-creating conditions. His view of the nature of emotion involves biologically prewired mechanisms linked to survival, but in its complexity does not adequately distinguish the environmental, cognitive, and behavioral conditions that differentiate annoyance from fear. Moreover, there is some ambiguity in his model about the involvement of cognitive mediation. While he states in various ways that endangerment is a *perceived* condition, both his earlier and later (Zillmann, 1983) models construe emotional states as products of skeletal-motor and excitatory reactions which are under stimulus and reinforcement control. His experiential component, which has cognitive dimensions, is given as an awareness and corrective mechanism; the initial emotional reaction is assumed to be outside voluntary control. He quite specifically states that impulsive hostility and aggression are *not* cognitively medi-

ated. This position, in my own view, ignores the role of cognitive structures which influence what receives our attention and how it is perceived.

Cognitive mediation need not be understood as only an intermediary process, interposed between exposure to some stimulus and physiological/behavioral reactions. In addition to explicit thinking or otherwise conscious operations that might be involved in an event-thought-reaction sequence, cognitive "mediation" should be understood as an automatic and intrinsic part of the perceptual process. Philosophers of science such as Wittgenstein (1953) and Hanson (1969) have made precisely this point in elaborate and elegant accounts of the perceptual process. "We do not begin with the visual sensation and only then turn our theories and interpretations loose on it. In a most important way our theories and interpretations are in the *seeing* from the outset" (Hanson, 1969, p. 88). Yet criticisms of cognitive mediation views, such as the arguments given by Berkowitz (1983), fail to treat cognitive appraisal as anything other than an operation tandem to the observing. Berkowitz (1983) focused his arguments on the issue of "cognitive labeling" and in doing so confused theoretical positions about cognitive processes that mediate the occurrence or activation of anger with positions about what *defines* anger and therefore prompts aggressive behavior.³ It also seems that he mistakes experimental procedures (Schachter & Singer, 1962) used to test a theory with a process model for how emotion is activated.

First, it is safe to assume that cognitive processing of information happens in milliseconds, so it would be misleading to suggest that appraisal processes, even when temporally subsequent to observing, are phenomenologically experienced by the person. More routinely, antagonistic appraisals are embedded in the very perception of the event or occur instantaneously upon exposure to the stimulus condition. One need not "think about" an aversive event to experience anger. Prepotent cognitive structures disposed toward antagonism operate automatically to determine what is perceived and how it is perceived. Useful distinctions can be made between impulsive versus appraisal-guided aggres-

³ Berkowitz (1983) argues for a general arousal model whereby prepotent responses (aggression) are energized by arousal states. In doing so he relies on the Geen and O'Neal (1969) experiment which he considers to be neglected by cognitive proponents. However, arousal was never measured in that experiment, and its use of a 60-decibel noise for 2 minutes does not constitute a condition of much potency. In fairness to Berkowitz, the use of the term "labeling" by various cognitivists has been misleading because it suggests that the cognitive component of anger is a discrete act done subsequent to the presence of the arousal. This results in obvious misunderstandings reflected in Berkowitz's examples intended to represent the cognitive labeling position.

sion, as done by Zillmann, but it would be a mistake to ignore cognitive structures as determinants of impulsive aggression and the anger associated with it. Their articulation remains for a subsequent work and should include culturally based symbolization (cf. later section on sociological theory).

Therapeutic interventions based on cognitive modification have been successfully used to remediate impulsive control problems with adults (Novaco, 1975) and children (Hinshaw, Henker, & Whalen, 1984; Kendall & Finch, 1979). While it might be that such interventions prevent impulsive reactions because a cognitive operation or delay is being interposed between stimulus and response, it may also be that the person's perception of the stimulus events has been reprogrammed. Not enough is known about the therapeutic change process to determine what prevails, but it is a safe bet that both perceptual modification and self-control intercession are involved.

Zillmann's key contribution to understanding anger as a stress-related phenomenon is his idea of excitation transfer. Simply stated, excitation residues from prior arousal can combine with excitatory responses evoked by some present event. This transfer of excitation will enhance or intensify the experience of anger and aggressive behavior in the immediate situation (when it is cognitively guided by cues of anger/aggression). Transfer effects are not hypothesized to occur when residual arousal is attributed to nonprovocation sources. This concept is important because it provides a theoretical and empirical basis for understanding how exposure to stressors, both acute and ambient, can predispose the person to respond angrily when faced with a minor provocation. Further, it reinforces the need for arousal reduction techniques as part of a therapeutic program.

Anger is thus a facilitating condition for aggression in the theories of Berkowitz, Feshbach, Bandura, and Zillmann, whether this facilitation is understood as a response-energizing, response-motivating, or response-activating function. For the most part, however, the research attention was directed toward the environmental stimuli and setting events that elicited aggression and toward the form of aggressive behavior manifested. Except for Zillmann's research on arousal states, anger became a nearly inconsequential intermediate phenomenon. The work of Konecni (1975a,b) is a notable exception to be given separate treatment in the section on catharsis that follows. In the majority of research paradigms, however, subjects were provoked to anger prior to being given the opportunity to aggress, but this was done as a perfunctory step in the laboratory procedure. Anger was something for which one did a manipulation check; it was not the subject of more than one or two

simple measurements, unless catharsis was being studied. Yet, even in some catharsis experiments, anger induction was not a part of the research design.

3. Catharsis

Although the "Frustration and Aggression" volume ignored anger in detailing factors associated with the occurrence of aggression, it subsequently sparked scientific debate on a topic fundamental to understanding the relationship between anger and aggression, namely, the "catharsis" controversy. The topic of catharsis is multiplex, being associated with aspects of theater, psychotherapy, contact sports, media violence, and other matters. Additionally, because it pertains to the reduction of aggression, albeit vaguely, it has had strong appeal as a research issue and has oddly been positioned in texts under the category of "prevention and control of aggression" (e.g., Baron, 1977).

Cathartic effects can be understood as a special case of anger/aggression phenomena, involving reciprocal causal relationships between arousal, action, and cognition, as Konecni's model delineates. However, with regard to preventing and regulating anger and aggression among seriously affected persons, catharsis procedures have at best a minimal role in behaviorally oriented programs.⁴ Because of the clinical perspective that guides this article, the attention to catharsis given here will bear in mind its relevance to treatment.

The concept of catharsis is typically traced historically to Aristotle (e.g., Berkowitz, 1970; Quanty, 1976), who thought that in watching tragedies, members of the audience would be purged of pity, fear, and anger by vicariously experiencing the tragic performance. However, Konecni (1984), who has done preeminent laboratory research on this topic (Konecni, 1975a; Konecni & Ebbsen, 1976), points out that researchers ignored the Platonic version of the hypothesis.

Plato (in "The Republic") had this advice for men made angry: '(I)f one man is angry with another, he can take it out of him on the spot, and will be less likely to pursue the quarrel further' . . . Thus, the *performance of aggressive actions*, provided that one is *angry*, against the *anger instigator*, will decrease the probability of further *violent actions*. [Konecni, 1984, p. 30]

⁴ A cognitive-behavioral approach such as my own might on occasion have the client engage in a cathartic activity as a form of impulse control as a temporary strategy. For example, a client who has minimal control over aggressive outbursts can wisely be coached to direct the impulses toward an inanimate object as an alternative to brutalizing a family member. This of course is an intermediary tactic intended to deflect assault and promote attentional shift.

He asserts that this is a more enlightened statement than the Aristotelian position that "the *observation* of violent displays should lead to a decrease in *arousal levels* and the *degree of negative emotions*" (p. 30). These two versions of the catharsis hypothesis obviously refer to different relevant variables, antecedent and consequent, and thus dictate different research paradigms. Certain researchers, therefore, formulated conclusions about catharsis without recognizing the limitations of their research procedures, while others constructed poorly reasoned research designs—or as Konecni says, "expected the manipulation of Aristotelian independent variables to produce a decrease in Platonic dependent measures" (Konecni, 1984, p. 31).

The interest in the catharsis hypothesis was most certainly linked to several factors: (1) the influence of Freudian personality theory, buttressed by animal ethology, particularly the writings of Lorenz, (2) the broad appeal of psychodynamic approaches to therapy, and (3) the value of the catharsis proposition as a plausible justification for portraying violence in film and/or for the participation in or watching of physical contact sports. The hypothesis as stated by Dollard *et al.* (1939) is that "[T]he occurrence of any act of aggression is assumed to reduce the instigation to aggression" (p. 50). This idea is derived from a more general view (Freudian) of behavior and personality as driven by internal energy which requires periodic discharge. Catharsis is the expression/release of internal tension, and the "cathartic effect" is the reduction of this tension reflected in a decreased probability of subsequent aggression. The dominance of Freudian theory in the field of personality prior to the 1950s—and really to the 1960s, when behavioristic models took hold, notwithstanding the prior contributions of Lewin, Allport, Rogers, and Murray—made for acceptance of the catharsis proposition. Support for the aggression catharsis concept came also from the writings of Lorenz (1966) and other ethologists who asserted the existence of an aggressive instinct to which they assigned causal properties. Aggressive behavior was viewed as having energy discharge or tension reduction functions. In generalizing his animal behavior theories to humans, Lorenz prescribed cathartic activity as an aggression control strategy.

The idea of tension reduction via outward expression was fundamental to psychoanalytic *therapy* and later to other psychodynamic approaches which emphasize the expression of blocked or "dammed-up" emotions. "Catharsis" for Freud principally was the new method that he called his "talking cure." Initially suggested to him by Breuer as a procedure used in conjunction with hypnosis, Freud soon dropped the hypnotic component (because it disguised transference and resistance) and began to use a technique involving the intense concentration of the

patient while Freud applied pressure to the patient's forehead, providing words of encouragement to bring out the hidden memories. Freud and Breuer were both convinced that "hysterics suffer mainly from reminiscences" (Freud & Breuer, 1893). When Freud discovered the phenomenon of resistance, he abandoned deliberate suggestion in favor of urging the patient to avoid censorship of thoughts and to "free associate." Cathartic therapy attempted to bring the original experience into consciousness with its accompanying affect. Allowing the patient to talk out was believed to provide for the discharge or "abreaction" of the affect. Thus, the force that maintained the symptom would be eliminated, and the symptom consequently should vanish.

Somewhat analogously, Perls (1969), in his theory of Gestalt therapy, advocated awareness of one's experience and the expression of emotion—for example:

If you have any difficulties in communication with somebody, look for your resentments. Resentments are among the worst possible unfinished situations—unfinished gestalts. If you resent, you can neither let go nor have it out. Resentment is an emotion of central importance . . . If you feel resentment, be able to express your resentment. [p. 49]

Importantly, the confrontational style of Gestalt therapy (e.g., the "hot seat" technique in group therapy), and the use that it makes of processes like polarization to enhance awareness of psychological experiences, pull for the expression of strong emotions.

Other psychodynamic approaches like that of Bach (Bach & Wyden, 1968; Bach & Bernhard, 1971) emphasize the value of catharsis of anger. Berkowitz (1973) has been strongly critical of Perls, Bach, and others, referring to them as "ventilationists"—a theme picked up by Tavis (1982) as well. But in reading Bach's work and in a brief exposure to his practice, I find Berkowitz's criticisms to be unfair and Tavis' lumping of Bach with Rubin (1969) to be hasty (cf. Tavis, 1982, p. 41). Rubin never achieves Bach's complexity of understanding anger nor does he ever approximate the level of instruction Bach provides on how to communicate about anger. Bach and Wyden (1968) is subtitled "How to fight fair in love and marriage" and they provide excellent concepts for understanding styles of communication and for correcting maladaptive patterns. With regard to my statement that certain criticisms have been unfair, I quote from Bach and Wyden (1968):

Another brand of unguided hostility that can lead to dreadful trouble is the volcanic eruption that we call the Vesuvius. This is just blowing-out steam—a spontaneous irrelevant sounding-off of free-floating hostility. It is an adult temper tantrum that does not involve a partner directly, although it is advisable to have an intimate on hand as an audience . . . The worst way to handle the Vesuvius is to take it at face

value and 'hook in.' Suppose a husband suddenly shouts, 'I'm going to take this lousy goddamn lawn mower and throw it in the swimming pool!' The trained wife would never say, 'Yeah? You and who else, you pip-squeak?' She would wait for the squall to subside. [pp. 59–60]

Bach himself states that he disagrees with the criticisms by Berkowitz, but unfortunately gives little elaboration (cf. Bach & Wyden, 1968, pp. 342–343) of this disagreement. He does, however, comment on theory:

The old F–A theory was unable to elucidate, let alone account for, the major facts observable in our clinical practice: that when involved people fight, they fight not only to 'do each other in,' as the F–A theory would demand, but also to change for the better. True, they may fight to remove frustration but not necessarily to punish or injure the partner who is perceived as the frustrator. [p. 364]

While Bach unmistakably follows a hydraulic, tension reduction model in his view of anger and catharsis, it is quite mistaken to construe his approach as supportive of the uninhibited expression of anger. His understanding of anger expression is that it be in the service of solving some problem or issue in the relationship and that the communications be uncontaminated by what I refer to as antique agendas, below-the-belt shots, and other unfair, nonconstructive messages.

The constructive expression of anger, as Holt (1970) indicated, is intended to achieve a cognitive clarification or restructuring of the anger-arousing events. It is a process whereby people not only express feelings, but communicate their definitions of the situation and indicate desired changes. The "ventilationist" argument is a straw man, banking on the associations of catharsis and anger expression with fringe therapies (often found in my home state). Most psychotherapies do not subscribe to a ventilation model and the implications of that metaphor.

As it is well known, the topic of catharsis has extended beyond the clinical realm to matters of media violence portrayals and to debates about the value of physical contact sports for participants and spectators. Much has been written on these issues, especially the former, and I will make no attempt to review them. Nevertheless, the point can be made that the catharsis hypothesis acquired interest value by virtue of being a plausible justification for aggression displayed or enacted in these forms. This was the case for both sides of the argument. If indeed there was something socially redeeming about the vicarious experience of aggression or the redirection of aggressive energies to substitute targets in ritualized games, then various social and economic institutions stood to gain. Similarly, the potential appeal of this conjecture, which emanated from Freud and Lorenz, drew the fire of behaviorists who were eager to make the case for social learning models over psychodynamic/instinct models. However, what might also be considered is

that opposition to catharsis arguments in these areas of media violence and physical contact sports was as much determined by philosophical and aesthetic preferences as by convictions about scientific theory. Convictions about what constitutes good cinema, entertainment, and recreation may have introduced observational and methodological biases that have gone unexamined.

A full discussion of catharsis issues and scientific findings cannot be given here, and it is far better in any case to refer to Konecni's (1975a, 1984) handling of this task. What must be given attention is Konecni's basic model. To account for preexisting research on catharsis and for his own experimental findings, Konecni (1975a,b) proposed a bidirectional causality model of anger and aggression. This states that level of anger is an important determinant of aggressive behavior and that the expression of aggression can decrease level of anger, thus decreasing subsequent aggressive behavior. The latter statement, of course, pertains to the "cathartic effect" which Konecni found in unusually complex experiments that were meticulous in procedural requirements for demonstrating catharsis and were carefully controlled to account for competing explanations (e.g., self-arousal and dissipation) of the effects. However, it is clear from his theory and empirical findings that (1) both anger and aggression can be decreased by nonaggressive activities; (2) the cathartic results pertain to the *immediate* consequences of aggression by angered persons; and (3) over time "aggression breeds aggression." With regard to the latter point, Konecni's model indicates that reinforcement contingencies for aggressive behavior via its anger-reducing properties, cognitive concomitants of anger which endure and can lead to reinstigation, and the development of aggressive response patterns in anticipation of anger cues will increase the probability of aggression as a response to provocation.

It has seemed ironic that so many years of research passed before someone elucidated what was contained in Dollard *et al.* (1939) in a footnote apparently often overlooked:

Presumably this reduction is more or less temporary, and the instigation to aggression will build up again if the original frustration persists. Also the repetition of a mode of release may produce learning of it. Throughout this hypothesis both the role of temporal factors and the influence of learning present problems actively in need of detailed solution. [p. 50]

These perspectives on anger in psychological theory can be enriched by other conceptions at a different level of analysis that have import for understanding anger as a problem condition. While sociologists do not concern themselves with the dynamics of emotion as subject matter,

there is much relevance for our topic in the area of sociological thought, which has often been ignored by the psychologically minded.

C. Sociological Theory

While psychological approaches are concerned with the person, family, or small group as the unit of analysis, sociological approaches deal with the social group or social structure. Thus, explanations of human aggression move away from factors within the person or in an individual's immediate environment to conceptions about societies and social systems. Not only are different assumptions brought to bear on the subject matter, but very different phenomena are considered to be relevant. Thus, it is not a matter of interpreting the same thing in different ways but of looking at different things at the start. This is a matter of "levels of analysis," a concept that will receive some elaboration subsequently.

At a societal level, problems of anger and aggression might be thought to pertain primarily to the lives of persons/groups of lower social strata. Acts of aggression, within a society, are commonly associated with persons who belong to poor, uneducated, politically disenfranchised social classes. Both individual and collective violence is typically linked with those on the lower rungs of the social stratification system. In this regard, I have argued that diminished attention to anger and aggression as problems of personal adjustment was in part a result of the social status of the populations typically identified as exhibiting aggressive behavior (Novaco, 1985). Incarcerated criminals, low socioeconomic status (SES) minorities, combat veterans, child molesters, and perpetrators of family violence are certainly not among the list of preferred client populations. The unattractiveness of these client groups has attenuated the range of efforts devoted to understanding their problem conditions and developing remedies for them. However, media coverage and social consciousness has resulted in greater concern for these clinical populations, and it has also become obvious that high-status persons are not immune to having anger problems.

From a sociological standpoint, problems related to anger and aggression are best addressed as matters of social structure, not as matters of psychopathology. A number of sociological approaches to deviance and criminal behavior, including social disorganization theory (Shaw & McKay, 1942; Thrasher, 1927), frustrated aspiration or opportunity structure theory (Merton, 1957; Cloward & Ohlin, 1960), and conflict theory (Turk, 1969) would view anger/aggression phenomena as products of the social order. The social structural analysis, inspired by Mer-

ton, asserts that inherent in society's social stratification are degrees of social mobility, which are constrained for low-status persons because there is differential access to culturally prescribed means for attaining culturally established goals. Merton (1938) saw the disjunction between goals and means as a condition of strain produced by the social structure. In effect, his ideas and those of other sociologists provide an important extension for frustration-aggression theory and offer many ideas for understanding contextual determinants of anger.

Merton's (1938) analysis of social structural determinants of deviant behavior took issue with Freudian ideas that had influenced sociological thought. Accordingly, social order was being understood as an "impulse management" device, a way of regulating biological-based tensions. Deviance or nonconformity was thereby viewed as a product of impulses, rooted in original nature, breaking social control. Merton's concept of social structure and anomie (a condition of deregulation of social life) was that social structure not only entails culturally defined goals, purposes, and interests, but it also defines, regulates, and controls the means acceptable for achieving these goals. In this view, deviance results from strain created by the social structure when legitimate means for attaining culturally espoused goals are unavailable for members of certain classes in the society.

Within this perspective anger can be understood in terms of frustrated aspirations resulting from the inaccessibility of effective institutional means for attaining valued success goals. Aggression or antisocial conduct is seen as a product of structural inconsistency. For example, Merton's (1938) analysis of Chicago gangsters runs as follows:

. . . specialized areas of vice in the near north side of Chicago constitute a 'normal' response to a situation where the cultural emphasis on pecuniary success has been absorbed, but where there is little access to conventional and legitimate means for attaining such success the conventional occupational opportunities of persons in this area are almost completely limited to manual labor. Given our cultural stigmatization of manual labor, and its correlate, the prestige of white collar work, it is clear that the result is a strain toward innovative practices . . . Within this contrast, Capone represents the triumph of amoral intelligence over morally prescribed 'failure' . . . [pp. 678-679]

Then, he states what provided the ideological basis for many governmental programs in the 1960s:

Frustration and thwarted aspirations lead to the search for avenues of escape from a culturally induced intolerable situation; or unrelieved ambition may eventuate in illicit attempts to acquire the dominant values. The American stress on pecuniary success and ambitiousness for all thus invites exaggerated anxieties, hostilities, neuroses, and antisocial behavior. [p. 680]

Young people in urban areas are thought to be especially at risk for strain because they are having their first experiences with the disjunction between the American Dream and truncated opportunities. Merton does not state that all deviant acts are committed by those who are under strain, nor does he provide a formula for predicting which type of adaptation (conformity, innovation, ritualism, retreatism, rebellion) will be enacted. What he does say is that pressure for deviant behavior is greater on those experiencing the disjunction between means and ends.

Merton's adaptation types designate conditions that correspond to whether the person accepts or rejects cultural goals and means. Violence can be associated with three of these types: "innovation" (acceptance of goals but rejection of means) can involve violence as illegitimate means (e.g., robbery, murder) are undertaken; "retreatism" (rejection of both goals and means) may be accompanied by violence, as when addicts engage in crime to support their habits; and "rebellion" (rejection of cultural goals and means, but new ones are substituted) can involve violence, perhaps collective, as part of revolutionary activities. Regarding anger, manifestations can be seen to occur with these same three adaptation types. Anger is part of the intergroup and intragroup struggles of the "innovator"; it may appear as part of a clinical syndrome for the mentally ill or alcoholic "retreatist"; and for the "rebel" it is an energizing force for activating social change and for perseverance, as well as providing justification for acts of violence. Terrorist events in recent years have made the latter point all too familiar.

The ideas of Merton were expanded by Cloward and Ohlin (1960). They asserted that Merton's theory views the person predominantly in terms of *legitimate* opportunity structures, neglecting the existence of illegitimate structures and, more importantly, the *differential* access of some persons/communities to either legitimate or illegitimate means. Thus, to account for violent behavior, they assert that the availability of illegitimate opportunity is a crucial factor when culturally approved means are blocked.

The writings of Cloward and Ohlin work to link the ideas of Merton concerning anomie with the ideas of Chicago school sociologists, such as Shaw and McKay (1942), which emphasized *cultural transmission*. These latter authors had observed that in certain areas of the city, high rates of crime and delinquency were traditional. They accounted for this in terms of the breakdown of social controls and transmission through play groups and gangs. Cloward and Ohlin bridge these works by thinking in terms of subcultures.

The concept of a subculture is that of a collective or aggregate of persons having a distinct set of values, norms, and symbols within the

larger society. Cloward and Ohlin distinguish criminal versus conflict subcultures in a way that bears on how aggression or violence is understood. Criminal subcultures develop in communities where illegitimate opportunity structures exist (via organized crime), and here violence is thought to have instrumental functions. In contrast, conflict subcultures develop where no opportunity structures exist, and aggression or violence in this case is seen to have expressive functions.⁵ Accordingly, it is the conflict subculture that emphasizes gang fighting and other violence. Conflict subcultures develop when there is no access to either conventional or criminal opportunity structures. Gang violence erupts as an expression of frustration, and then it becomes the fabric of the subculture. In contrast, the *criminal* subculture emphasizes rational planning for economic success. Criminal subcultures direct violence toward instrumental functions and attempt to minimize violence as a form of emotional expression, as impulsive persons lacking in self-control are a detriment to organized, goal-oriented groups.

Cloward and Ohlin's functional distinction (instrumental versus expressive), however, is askew in its characterization of instrumentality by restricting it to refer to pecuniary goals. While gang fighting has expressive functions, it also has instrumental ones, such as group status enhancement, territoriality, etc. Matters of instrumentality are best addressed in terms of the goals that are being served, and, in this sense, the instrumental versus expressive distinction may be spurious.

Subcultures of violence (Cohen, 1955; Cohen & Short, 1958; Wolfgang & Ferracuti, 1967) are thought to exist when aggressive behavior is endorsed or promoted as a normative response for dealing with problem situations. The prevalence of violence among certain social groups is construed to be a product of norms and values that encourage violence, in effect, as "sympathetic moral climate," to use Cohen's (1955) expression.

The concept of a violent subculture is most commonly associated with the work of Wolfgang and Ferracuti (1967), who inferred that a high prevalence of violence among subgroups in society indicates the existence of subcultures which view violence as normative. That is, violence is a salient part of the subcultural fabric which provides support and encouragement for the use of coercion and harm-doing. Enculturation in these social environments leads not only to the acceptance of violence, but also to the learning that violence is expected as a response to certain

⁵ Those who fail in the alternative avenues of opportunity, legitimate or illegitimate, comprise a *retreatism* subculture, becoming addicts, hobos, psychotics, or social isolates.

problem situations. As this learning process must involve the recognition and labeling of social stimuli as provocations, the concept of a violent subculture is useful for understanding the cognitive systems of individuals embedded therein. Knowledge of the values, norms, and social roles of a subculture are indispensable for understanding the symbolization inherent in the cognitions that determine anger reactions.

Working class groups and black youth have typically been associated with the idea of violent subcultures in sociological writings. But a well-known exemplification of a violent subculture (cf. Scherer, Abeles, & Fisher, 1975) is the Klu Klux Klan who, along with other white vigilante groups, flourished in the South and elsewhere, seeking to maintain or reestablish antebellum social conditions. Another interesting account of a violent subculture is given by Newman (1979) in describing the Doukhobor sect in Canada (Saskatchewan). These people migrated from Russia to North America in the nineteenth century. They were industrious settlers and were devoted to ideals of brotherhood, community, pacifism, and nonmaterial existence. However, when their spiritual leader subsequently arrived from Russia, he proclaimed a series of edicts that sent the group on a destructive course. Initial conflicts with the Canadian government about education and property soon escalated from protest marches to arsons and bombings, spearheaded by a subset within the community called the Sons of Freedom. Following the assassination of the spiritual leader (by his own son) the sect became increasingly violent. In addition to these ethnic examples of subcultures (to which one could add, among others, radical Shiite Muslims), there are cases such as that of the Manson family (Bugliosi, 1974), who pursue group goals, however bizarre, by violent means.

Violence linked to subcultures can constitute an important form of intergroup conflict when the aggressive actions are directed at persons outside the subculture. An integrative analysis of intergroup violence can be found in Scherer *et al.* (1975), who draw upon Smelser's (1963) "value-added" theory of collective behavior which pertains to stepwise influence processes which sequentially shape group behavior. Scherer *et al.* apply this idea⁶ to understanding intergroup violence, starting with general causal factors which, when joined by subsequent influences, progressively narrow the range of group behaviors to increasingly in-

⁶ Scherer, Abeles, and Fischer add "subjective deprivation" to Smelser's four factors in the stepwise process.

clude violent actions. Their model includes the following components: (1) structural conduciveness (proximity, competition, and lack of protest options), (2) structural strain (conflicts or ambiguity among norms and values), (3) subjective deprivation (regarding power, prestige, or possessions), (4) generalized beliefs, especially prejudice or animosity toward outgroups, and (5) agents of social control, whose action or inaction determines whether hostile attitudes are transformed to aggressive behavior. When these elements act in concert, intergroup violence is expected to ensue.

These views of social strain assume the operation of psychological processes as mediating variables. They directly pertain to the topic of aggression, but they also inform us about anger. First, they expand our purview of the conditions that may cause anger, suggesting that anger can be induced by circumstances that are ambient (versus acute) and are not a salient part of an immediate situation. The enduring and pervasive quality of aversive and frustrating social conditions suggests the possibility of accumulating forces that dispose the person toward anger proneness. Second, our attention is called to functional characteristics of anger vis-à-vis social roles and social status. Anger may be integral to adaptive strategies in attaining social goals—energizing action, shaping one's image, maintaining social position, fostering group coherence, and so on. Third, subcultural norms and values can rapidly be seen as important determinants of anger patterns in terms of the eliciting events, the permissibility and prepotency of anger, styles of expression, and the utilization of anger as a coping strategy. Subcultural factors become central to understanding the cognitive structures and cognitive processes that influence anger reactions.

D. Distinguishing Levels of Analysis

The social structural analysis raises some interesting issues with regard to anger and its modification. It might be argued that anger and aggression are responses to constraining and inequitable societal circumstances and thus serve adaptive functions for certain individuals and groups. Another conjecture might be that anger/aggression problems cannot be remedied unless conditions of society are modified. In this regard, we must avoid errors of reasoning which spring from confusion about levels of analysis. Both reductionism (cf. Jessor, 1958) and its complement, which might be called "expansionism," fail to recognize the requirements of conceptual coordination between theoretical terms and propositions on the one hand and empirical phenomena on the

other.⁷ Reductionistic arguments assert that microlevel analyses constitute more causal, fundamental, or basic explanations. They fail to recognize that the existence of microlevel *correlates* to macrolevel phenomena does not provide sufficient conditions for translation and representation of those phenomena. The same confusion can operate in the reverse direction when macrolevel theory is seen as grand explanation. Macrolevel propositions, like those pertaining to social structure, simply do not describe or explain events and processes at the level of individual behavior. They are not meant to do so, nor do they entail methodologies for the study of such phenomena. Consequently, behavioral phenomena cannot be "recovered" from social structural accounts nor can such accounts prescribe a course of action to take for matters of intervention in individual cases.

The expression, "level of analysis," is an abstraction pertaining to types of theorizing and methodology about some broadly conceived subject matter. As social scientists, we use it with regard to the range of attempts to understand human behavior and society. The level of analysis notion is that one may adopt investigative approaches ranging from the biochemical to the anthropological, depending on the phenomena of interest. Thus, it has the appearance of corresponding to disciplinary orientation, such as the psychological or the sociological. Indeed, the various disciplines construct terms, propositions, and methods to match the observational elements and their dynamic properties that are being studied; hence one can think of the various disciplines (and their associated theories and methodologies) as hierarchically ordered from microlevel to macrolevel approaches. Yet if one merely conceives of "levels of analysis" as meaning disciplinary orientation (e.g., Sherif & Sherif, 1970), the logical shortcomings of attempts at cross-level explanation may not be apparent.

The "levels" concept connotes a stratification of elements or units and of systems of these elements or units. The stratification involves a hierarchical ordering whereby macrolevel systems encompass microlevel systems. Correspondingly, factors and processes that operate at microlevels have a more particularized influence (on the elements of human society), whereas macrolevel factors have a more generalized influence.

⁷ Jessor develops the concept of reductionism as a set of propositions: (1) that the disciplines of science can be hierarchically ordered from micro to macro, (2) that the terms and laws of one discipline can be fully translated into another, (3) that the deduction-translation proceeds only from macro- to microdisciplines (reduction), and (4) that the more micro the level of terms employed, the more causal, fundamental, and basic is the explanation. The absence of theoretical machinery in microlevel disciplines to account for the functional context of behavior precludes reductionism on logical grounds.

Moreover, the individual can be viewed as nested within overlapping subsystems, such as the family, neighborhood, organizations, local community, institutions, geopolitical entities, and cultural fabrics. However, while macrolevel systems include (as membership) the components of microlevel systems (e.g., Standard Metropolitan Statistical Area includes cities, which include neighborhoods, which include households, which include individuals, which include intraorganismic processes), microlevel phenomena are not logically entailed in macrolevel concepts. Aggregate level theory about social structure and strain does not incorporate theory about variation in emotion among individuals and will not likely be useful in accounting for why Rocky is angry more often than Bob or why he is angry from 2:00 to 2:30 PM but not angry for the rest of the afternoon. Moreover, while macrolevel phenomena have a more generalized range of influence on the subsumed units or elements, there is no uniformity of effect. Not all individuals in a community are affected by social strain conditions. Hence, aggregate level findings cannot be extrapolated to individual level occurrences. To do so constitutes the ecological fallacy (Robinson, 1950). Taking a child abuse example, conditions of economic strain have been causally linked to increases in child abuse (Steinberg, Catalano, & Dooley, 1981). However, the persons or families producing higher rates of abuse are not necessarily those experiencing economic strain.

To return the discussion specifically to anger, conditions of the social order undoubtedly have a causal role in the occurrence of anger and aggression. However, this level of analysis does not explain variations in anger/aggression among persons exposed to the same structural strains or persons who are part of the same subculture. Moreover, it neither addresses the malaise and impairment of the individual nor provides ways of achieving therapeutic change for persons who need treatment. Given the harmful effects that anger can have on personal well-being, psychologically based interventions are needed. Such intervention strategies do not preempt efforts to promote larger changes in the social system, such as reductions in inequality and discrimination against societal groups, changing attitudes toward violence-engendering social practices, improving criminal justice procedures, etc.

With regard to the observation (occasionally stated as a proclamation) that anger and aggression may be adaptive responses, the present analysis recognizes such adaptive functions, as delineated in previous writings (Novaco, 1976). Judgments about the maladaptive versus inadapative nature of a response nevertheless must be made with regard to identified outcomes and in the context of a value system. Being energized by anger to correct a condition of social inequity or to redress a

consensually acknowledged injustice is quite different than if the activation of anger were to mobilize an impulsive retaliation in response to minimal cues. Similarly, an aggressive response to terrorist behavior will be evaluated in positive or negative terms depending on political ideology and nationality.

Multilevel Analysis: The Study of Child Abuse as Example

The operation of macrolevel factors as determinants of anger and aggression, as well as the problem of levels of analysis can be illustrated with regard to the study of child abuse. Whether the abusive act be an impulsive battering or a calculated infliction of injury, the consequences of this form of aggression are indeed severe. In 1875, the Society for the Prevention of Cruelty to Animals filed a complaint against the parents of a young girl who was thought to have been abused and mistreated. At that time, child abuse was not against the law, and the court took no action. However, the concern generated by this case inspired the establishment of the Society for the Prevention of Cruelty to Children, and the problems of child abuse and family violence in general have become widely addressed topics. There is some indication that family violence will soon be identified as the nation's number one health problem.

Academic interest in child abuse was pioneered by a pediatric team at the University of Colorado Medical Center in the early 1960s. Kempe, Silverman, Steele, Droegemueller, and Silver (1962) conceived of the "battered-child syndrome" as a clinical condition of the child. Later followed a *psychiatric* framework in which abusing parents were thought to be immature, impulse ridden, dependent, demanding, and egocentric. The prototype of this approach was the work of Steele and Pollock (1973). The psychopathology model focused on personality deficits of the parents and on parent-child relationships in its analysis of the determinants of abuse. A prominent concept within this model was that of "role reversal," whereby the abusing parent is seen to have high dependency needs and relies on the child for nurturance. Since the satisfaction of these needs through the child is improbable, the parent is thwarted and reacts with aggression toward the child (frustration-aggression). Concomitantly, the parent is thought to endow the victim with the undesirable attributes that they see in themselves (projection, followed by displaced aggression).

Somewhat similar to the psychiatric or psychopathology model is the *social learning* approach. This approach focuses on the social circumstances of the parent's own child-rearing, vicariously learned parenting behavior, and the transmission of this in the abusers' interactions with their children. Patterns of abuse are viewed as being learned through

imitation, particularly behaviors concerned with the administration of punishment (Parke & Collmer, 1975; Lehman, 1976), which become dominant responses elicited at times of frustration and stress. Patterson's (1971, 1974) accounts of mutual acceleration of aversive responses add significantly to this general model. Thus, this alternative to the psychopathology orientation emphasizes vicarious learning, inconsistent discipline, aggressive response prepotency, and coercive exchanges in parent-child interactions. Other exemplifications of this approach consider cognitive mediational factors in the occurrence of abusive acts.

Both the psychopathology and social learning models are conceptualized at the individual level of analysis, pertaining to the behavior of persons and families. Alternative perspectives on child abuse can be found at the aggregate level of analysis with regard to aspects of social structure. One such model conceptualizes abuse as *social deviance*, a product of a social labeling process (Gelles, 1975). This model suggests that scientific investigations should focus on the process of labeling and the effects of the labeling. It argues that the outrageous cases with which the media acquaints us are but a small fraction of the instances that would be defined as child abuse. Gelles suggested that what should be studied are various gatekeepers' definitions of child abuse and how those definitions are applied. This model proposes that social systems be examined with regard to the labeling process (i.e., the medical, social science, criminal justice, educational, neighborhood/friendship, and family/kinship systems). The social philosophy and value premises of the society are also thought to be important causal dimensions (Gil, 1975).

Another aggregate level approach to child abuse is that which focuses on *economic and socioeconomic* determinants. Garbarino (1976) and Steinberg *et al.* (1981) are examples of this perspective. Garbarino sought to study whether a county's socioeconomic support system (i.e., human resources available to families) was related to rates of child abuse/maltreatment. While his dependent measures do not operationalize his conceptual variables in an optimal manner, he did find that socioeconomic factors (e.g., percentage of women in the labor force with young children and median income of households headed by females) accounted for highly significant proportions of variation in child abuse rates. Moreover, the results of his multiple regression analyses indicate that the effect is upon mothers and not families in general. While the cross-sectional approach used by Garbarino is subject to criticisms of third variable causation, Steinberg *et al.* (1981) used a cross-correlational time series methodology and found convincing support for the hypothesis that job loss on the aggregate level leads to increased stress, which

results in higher child abuse rates. Their findings are replicated in two metropolitan communities, which were each used as a control for the other to rule out effects such as weather cycles, societal trends, and data-recording policies. The hypothetical causal pattern may be conjectured to involve a complex chain of factors including parental stress, poor coping responses, limited instrumental resources, frustration, anger, and displacement.

It can be seen that the problem of child abuse has multiple levels of causation and that various transactional processes, both within families and between families and social systems, operate over time to shape conditions of abuse and/or their remediation. Both individual level and aggregate level approaches are needed to inform us about the nature of child abuse and to guide the development of intervention strategies. Child abuse also exemplifies a form of anger as a clinical and a social problem. It has thus served as an introduction to the next sections of this chapter, which attempt to map the manifestations and involvements of anger in societal problems of aggression and in forms of psychological disturbances.

III. THE ROLE OF ANGER IN PROBLEMS OF AGGRESSION AND VIOLENCE

As can be inferred from the foregoing section on theoretical perspectives, anger is understood in all theories as neither being necessary nor sufficient for aggressive behavior to occur. In the psychoanalytic framework, the impulse control functions of the ego operate to regulate aggression. Behavioristic theories assign anger an activating role, yet emphasize the importance of learning history, the presence of environmental cues, and various inhibitory mechanisms, such as the anticipation of punishment, aggression anxiety, and self-control coping skills. Sociological approaches generally rely on psychological constructs to account for particular occurrences of violence or to predict whether aggression will or will not occur. Aggression and violence, however, are construed primarily in terms of nonphenomenological factors, and aggression is accounted for in terms of its functions, its inducement by strain, and its enhancement by cultural values and norms.

If anger is neither necessary nor sufficient for aggression, might its importance in acts of violence be exaggerated? Perhaps one might think so in view of the activities of various criminal types for whom aggression is instrumental behavior. Among certain subcultures, anger may even be considered dysfunctional when violence is required. The expression,

"It's nothing personal—it's only business," reflects this outlook. And a more radical view of violence (Monahan & Novaco, 1978) would argue that violent acts are traditionally defined in ways that exclude organizational and corporate decision making which causes death and injury. Deliberate decisions to market defective products or to expose employees to hazardous conditions are not enacted in anger, but their outcomes are violent nevertheless.

Without arguing about how to categorize violence or about the base rates of various forms, it is readily apparent that a significant proportion of aggressive actions are either impulsive and anger driven or are premeditated actions that evolve from anger-laden personal or group agenda. Clearly, hundreds of studies in experimental psychology have found that when subjects are made angry or annoyed there is an increased probability of aggression. This conspicuously extends to assaultive criminal behavior. Not only does anger facilitate aggression; it can also function as an aggressive cue, prompting aggression by others. Both individual and collective violence are often characterized by anger and, while the "neither necessary nor sufficient" postulate clearly applies to individual violence, the case for collective violence is less clear. For collective violence, anger seems to operate as a condition of necessity. Action is mobilized under a hostile belief (Smelzer, 1963), and it is the anger of the aggrieved people, along with the inavailability of alternative means of protest or redress, that activates the violence. However, "collective violence" might be defined and instantiated in ways that exclude anger (e.g., corporate harm-doing decisions or certain acts of warfare, such as high-altitude bombing).

A. Individual Violence

Violent crime has routinely been defined, for purposes of national indexing, as entailing criminal homicide, aggravated assault, robbery, and forcible rape. It has often been observed that the distinction between the first two categories may well be a matter of how quickly the paramedics arrive or which particular organ is struck by the weapon. But in addition to these forms of criminal violence, we must also recognize child abuse and spouse abuse as special cases of assault and as prime manifestations of the destructive consequences of uncontrolled anger.

Consider that many forms of individual violence such as bar fights, neighborhood altercations, domestic conflicts, police-citizen confrontations, and motorist "road wars," as well as collective violence such as riots in urban and prison settings, involve the arousal of anger in the

escalation of events in the violent episode. Anger provides an energizing force that impels the attack response once an aversive event is appraised or interpreted as a provocation. Verbal remarks perceived as challenges, threats, or insults elicit anger which instigates aggressive behavior. This instigation is a function of environmental cues, level of arousal, diminution of inhibiting factors (internal control mechanisms and/or anticipated punishment contingencies), and the instrumentality of the aggression (perceived likelihood of producing desired outcomes). Whether we examine barroom brawls or battles over backyard fences, lethal consequences can result from anger provocation and its impairment to reason and judgment.

The involvement of anger in occurrences of individual violence can be approached with regard to (1) premeditated aggression and (2) impulsive aggression. This distinction is useful for understanding the dynamic properties of anger as well as differentiating forms of aggression as violent actions. The corresponding differences in anger processes have implications for therapeutic interventions.

Premeditated aggression is customarily thought to be fueled by anger as it is enacted to achieve retribution. If the act of vengeance or retaliation is instrumental to acquiring or maintaining power it may be devoid of anger, but planned violence typically has a strong anger component. Sometimes the activating event is a serious wrongdoing, yet personal vendettas are carried by individuals for perceived insults or injustices that are of such minor consequence. Anger "poisons the mind" in the sense that preoccupation with aversive experiences for which some other is held responsible interferes with constructive and creative thinking. Transparently, murder and aggravated assault often occur as calculated acts intended to satisfy anger that has fomented over some time interval.

In the case of murder, we can see that anger may or may not play a crucial instigating role. Here are some recent case illustrations:

1. A 32-year-old former city supervisor (a tough-on-crime conservative who stressed morality and was a former policeman) became frustrated over the mayor's refusal to reappoint him to the San Francisco Board of Supervisors. One day he climbed through the basement window of City Hall to avoid security officers. He then went to the mayor's office and subsequently to that of a city supervisor, who was a homosexual. He sequentially shot them in the back of the head at point blank range. Vengeance was his, as he executed men whom he viewed as his personal tormentors.
2. A 41-year-old man distraught over his lack of employment an-

nounced to his wife that he was going out "hunting humans." Indeed, heavily armed, he entered a crowded fast-food restaurant near San Diego and shouted "I'm going to kill you all." He then fired indiscriminately, killing 21 people and wounding many others in a horrible massacre. His neighbors recalled him as a man who never had a smile, an "antisocial" often involved in heated arguments with his neighbors and family. He was brutal toward dogs, including his own German Shepherd. The security guard firm from whom he recently sought employment wrote a 4-inch high "NO" on his job application. He was viewed as having an "attitude problem."

Contrast those examples with two others that also received national media coverage in recent years:

3. A 25-year-old man from Evergreen, Colorado, born of religious parents in Oklahoma, was described by those who knew him as cordial and friendly, although he was a loner. His father was a wealthy oilman, but the young man dropped out of college, becoming a drifter looking for odd jobs. When he was 22, he had joined a neo-Nazi group, but disengaged from it when he found the group to be insufficiently militant. At age 25, he attempted to assassinate the President of the United States—an action undertaken, he revealed, to prove his love for an actress whom he idolized.
4. A 42-year-old man checked himself and his 6-year-old son into a Southern California motel after a cross-country journey. His co-workers described him as having an obsessive love for his son. He had a history of skirmishes with the law, and the New York police were now after him. But he had been a flawless father, obsessed with his son's welfare. Yet, he doused this boy in flammable liquid and set him afire in that motel room.

While the first two examples of Dan White and of the San Ysidro massacre by James Huberty reflect the role of anger as a motivating force inciting the violent actions, the other two cases illustrate the "neither necessary nor sufficient" status of anger as a relevant antecedent to violence. In neither of the latter cases did the assailant feel anger toward the victim. Hinckley, in fact, had a mild admiration for Reagan, and Charles Rottenberg had a strong love for his son, despite this bizarre and appalling way of showing it. Other more violent cases can easily be put forth in this regard, such as that of Charles Manson and the Tate-La Bianca murders as analyzed by Bugliosi (1974).

Among the components of anger reactions that are involved in violent episodes of premeditated aggression, the role of *preoccupation and rumination* would seem to be highly significant. Surprisingly little is known about rumination processes as related to anger, although Bandura (1973) did offer a hypothesis in this regard. Surely it is obvious that in order to be angry about something one must pay attention to it and that dwelling on the provocation prolongs anger. Moreover, the tendency to revivify the provocation by repeated recall is another aspect of the preoccupation pattern. I have continuously attended to these elements as agenda items in the early stages of therapeutic procedure, and I also train therapists to spot these preoccupation tendencies and to help clients learn to short-circuit this process. Yet the potentially important empirical connections have not been mapped. The conditions of activation, the frequency, the duration, and the content of the ruminative anger cycle may be key determinants of violent episodes and have some value in predicting dangerousness. This is not to exaggerate the significance of anger perpetuation and reinstigation tendencies, but to indicate that these factors have been neglected elements in analyses of assaultive patients and criminals.

In cases of impulsive aggression, anger arousal seems to override higher order thought processes in activating and energizing destructive behavior. Berkowitz (1974) called attention to the impulsive qualities of aggressive behavior, although his exposition then had more to do with external evoking factors than with internal processes such as anger. It has of course been widely acknowledged that most homicides have a "spontaneous" rather than a "deliberate" character. The arousal of anger incites assault, mayhem, and fatal injury in the heat of provocation, often in the midst of arguments between relatives and acquaintances. Also, in Toch's (1969) analysis of assaultive encounters between police and criminals, he delineates these occurrences as an escalating sequence of psychological moves, of which anger is an integral component.

Among the most well-known psychological analyses of violent offenders is that of Megargee (1966), whose concept of the chronically overcontrolled hostile offender constitutes a mixture of impulsive and premeditated forms. The account given by Megargee of the overcontrolled offender as someone who routinely buries his resentment and then in one instance lashes out in the presence of aggressive cues portrays an impulsive act of violence. However, what appears to be an impulsive act may actually be the product of recurrent anger excessively inhibited and stemming from preoccupation. Weiss, Lamberti, and Blackman (1960) referred to such individuals as "sudden murderers."

Megargee had reasoned that the dynamics underlying extremely as-

saultive behavior might vary considerably from that for mild and moderate instances of assault. His hypothesis of overcontrol was of course at variance with routine expectations that highly aggressive persons are characteristically undercontrolled. Megargee's idea was inspired by a validation study on MMPI scales that he had conducted (Megargee & Mendelsohn, 1962) which found violent offenders to have less hostility and more control than nonviolent and other criminal subjects. He then developed an MMPI-derived overcontrolled hostility (OH) scale which succeeded in differentiating extremely assaultive criminals from less assaultive groups. His findings were also buttressed by the work of others, such as Blackburn (1968), with assaultive psychiatric patients. Blackburn found that extremely assaultive psychiatric offenders, in comparison to moderately assaultive ones, were significantly more overcontrolled, introverted, and conforming as indexed by various MMPI scales. The extreme assaultives were also less likely to have a criminal record or to have a diagnosis of psychopathic disorder.

Megargee's concept is that a significant proportion of homicides are committed by persons for whom the aggressive act is completely uncharacteristic, having typically exercised high levels of control and inhibition:

His inhibitions against the expression of aggression are extremely rigid so he rarely, if ever, responds with aggression no matter how great the provocation. These inhibitions are not focused on a few specific targets, as was the case with the Undercontrolled Aggressive type, but instead are quite general. He is, therefore, unable to make use of the mechanism of displacement or response generalization. The result is that through some form of temporal summation, such as described by Dollard, Doob, Miller, Mowrer, and Sears (1939, p. 31), his instigation to aggression builds up over time. In some cases, the instigation to aggression summates to the point where it exceeds even his excessive defenses. [Megargee, 1966, pp. 2-3]

In this account and in subsequent writings (Megargee, 1982), he does not articulate the psychological processes involved in the overcontrol phenomenon. Megargee does make reference to psychodynamic personality processes (repressed hostility, denial, displacement, and sublimation), but he does not provide elaboration. The absence of this process account is reflected in Megargee's prescription for intervention being "some form of psychotherapy" to reduce excessive inhibitions and to learn to acknowledge and accept feelings. The initial account of the "mild-mannered, long suffering individual who buries his resentment under rigid but brittle controls" (Megargee & Mendelsohn, 1962, p. 437) begs for a more detailed assessment of the psychological deficit, particularly as it might lead to early detection. Developmental factors are

likely to be important precursors. Haven (1966) found evidence for over-socialization in the upbringing of the OH type, interpreting the resulting overcontrolled hostility in terms of reaction formation and repression, but I find these psychoanalytic concepts to have limited value in understanding anger. It also seems unnecessary and misleading to conceptualize the process of overcontrolled hostility in hydraulic model terminology, as Megargee does by invoking the Dollard *et al.* (1939) temporal summation metaphor. One can alternatively construe the process in terms of increasingly antagonistic cognitive appraisals, increases in cue salience, preoccupation, and prolonged arousal.

Understanding processes of anger rumination may be helpful in assessing overcontrolled offenders. Megargee (1966) had speculated that preoccupation with violence in fantasy might be a predictive factor. This may be an important marker for an otherwise controlled person, but it is misleading to overemphasize the content of the rumination to the exclusion of the other dimensions that I suggested earlier. As for predicting violence and dangerousness, it is now well known that there has been little success in this regard. Monahan's (1981) monograph, the definitive work on this topic, does hold out some hope, but the array of factors influencing the false-positive rate seems very difficult to counteract.

Another crime of anger-driven violence that has premeditated and impulsive forms is rape. Considerable work in the past decade has shown that male rapists attack their female victims to a significant degree for reasons that involve anger as much as sexual urges. Amir's (1971) study in Philadelphia of police data from 1958 to 1960 sparked social science interest in this subject. His study involved analyses of criminal justice system statistics and did not include psychological inquiry pertaining to offenders or victims. He did, however, theorize about his findings concerning patterns of forcible rape which indicated a high proportion of black intraracial rape and high rates of offenses by those of low SES and by young adults. He first reviewed and then was critical of psychodynamic explanations which account for rape in terms of Oedipal complex ideas (such as ambivalent feelings of anxiety, anger, and sexual attraction; hostility toward the mother displaced or projected onto other women). Instead, he proposed a "subculture of aggression and violence" explanation. However, as noted by Newman (1979), Philadelphia's well-entrenched ethnic communities may make that city a special case, well suited to subcultural explanation that is not so applicable to the nation as a whole. Of course, the problem of measurement reactivity and contemporary changes in rape reporting practices also weighs against Amir's analyses. Nevertheless, considerable interest was

generated among social scientists in the topic of rape and new efforts were made to provide explanation for this form of aggression.

One body of literature that emerged which emphasized the anger/aggression components of rape was penned by the radical feminists, spearheaded by works such as Brownmiller (1975). While the writings of other radicalized authors such as Dworkin (1976) and Daly (1978) are outrageous in their claims of misogyny (which require only a small inferential leap to interpret as a projection), Brownmiller's book had the appearance of scholarship, receiving accolades in educated circles. Oddly enough, many of those giving applause somehow were oblivious to a main thesis of the book, namely that all males in our society are in collusion with rapists who are tacitly commissioned to commit their deeds so as to maintain the patriarchal social structure. This view of rape as a socially constituted terror tactic of male tyranny rarely received the blunt criticism it deserved.⁸ More unfortunately, these extremist points of view filtered insidiously into various social system bureaucracies, seemingly endorsed for fear of being perceived as politically misaligned.

The new consciousness did prod the recognition that the act of rape is misconstrued as a "sex crime" and is more properly understood as an act of violence. Unresolved anger toward women, harbored over long periods of time and unmitigated by love experiences, does mark the personal histories of rapists. This theme can be found abundantly in clinical case books on rapists. MacDonald (1971), for example, provides many illustrations of rapists who harbor strong hostility toward women, thought to originate from childhood experiences and often potentiated by unhappy adult relationships. Psychoanalytic theory abounds in clinical accounts, which is to be expected with a matter of sex and aggression. Yet one of the most highly regarded books on rapists is that of Groth (1979), which was based on a clinical study of over 500 offenders. His well-written and thoughtful analysis is very informative about the involvement of anger. His opening remarks are that "careful clinical study of offenders reveals that rape is in fact serving primarily non-sexual needs. It is the sexual expression of power and anger. Forcible sexual assault is motivated more by retaliatory and compensatory motives than by sexual ones" (Groth, 1979, p. 2). He then develops his view that all rapes have three components: power, anger, and sexuality, al-

⁸ Malamuth and his colleagues, for example, have chosen to circumvent the highly politicized elements of the radical feminist treatises. Rather than merely noting that sexual violence in the mass media is claimed to be "hate literature" against women, the logic for such assertions might be challenged (or supported) with substantive arguments. Ordinarily, the substantive grounds for experimental hypotheses are given scrutiny that somehow is exempted for these topics.

though the hierarchy and interrelationship among these components varies across offenders. Three basic patterns of rape are correspondingly distinguished: the *anger* rape, the *power* rape, and the *sadistic* rape. These respectively comprise 40, 55, and 5% of the incidences in Groth's analysis.

For the anger rape category, Groth sees the assault as one of physical brutality whereby feelings of pent-up anger or rage are expressed or discharged. The use of excessive force is the operative characteristic. "The rape experience for this type of offender is one of conscious anger and rage, and he expresses his fury both physically and verbally. His aim is to hurt and debase his victim, and he expresses his contempt through abrasive and profane language" (Groth, 1979, p. 14). The rape is thought to constitute the ultimate expression of this pent-up anger, and this type of rapist is typically ungratified sexually by the act of rape. Groth succinctly states:

The anger rapist's relationships to important persons in his life are frequently fraught with conflict, irritation, and aggravation. The anger, resentment, hostility, and frustration engendered in these relationships is often displaced onto other individuals, and, therefore, the victim may be a complete stranger to the offender, someone who has been unfortunate enough to be in his presence at the point at which his controls begin to fail and his rage erupts. Although she has done nothing to warrant it, she becomes the target of his revenge—not revenge in a calculated, planned fashion but, instead, the recipient of an impulsive reaction precipitated by a situation she has had no part in [p. 16]

The impulsive aggression here may be directed to the subject of the anger or to a surrogate who may just be available for the displacement.

In contrast, the "power rape" is understood as an act with sexual conquest as its goal, involving a moderated use of force. But Groth's third rape pattern is one of sadism, where anger and power are eroticized. The offender takes pleasure in the aggression and the torment of the victim. Unlike the "anger rapist" who impulsively explodes in a rage, the behavior of the "sadistic rapist" is fully premeditated. "Usually, he captures his victim and then works himself into a frenzy as he assaults her" (Groth, 1979, p. 45). In extreme cases, the process of excitement escalates to lust murder.

In addition to such clinical studies, there has of course been an increasing amount of experimental work on erotica and aggression with inferences drawn to rape (cf. Donnerstein, 1983; Zillmann, 1979, 1983). Anger is often not part of the experimental design (e.g., Malamuth, 1981; Malamuth, Haber, & Feshbach, 1980), and subjects are almost exclusively undergraduates. Even for studies which include anger and deviant sexual arousal, the results at times do not justify the inferences

(e.g., Yates, Barbaree, & Marshall, 1984).⁹ To the extent that knowledge about the dynamics of rape is sought, I remain skeptical of the ecological validity of this line of research.

We can thus see that anger has diverse forms of involvement in individual level violence. It may or may not be the impetus for violent crime, although it typically has an integral role in the harm-doing sequence. In both premeditated and impulsive forms of violence, the destructive act may well have been prevented by anger control coping skills. Among the neglected aspects of assaultive syndromes are cognitive processes of preoccupation and rumination, which not only perpetuate and reinstate anger, but also create cognitive schema that predispose the person to respond aggressively to provocation.

B. Collective Violence

As with individual level violence, collective violence can be seen to have anger involvement in both premeditated and impulsive forms. There are infamous examples of planned violence in United States history with regard to interracial aggression. Fire bombing, lynching, vigilante ambush, and other assorted atrocities perpetrated by ignoble groups on black people stand as a blight on our past. Less often remembered, however, are Shays' Rebellion (reaction to land foreclosures), the Whiskey Rebellion (a tax revolt), and a variety of other agrarian protest uprisings that followed in logic and temperament the spirit of the American Revolution itself. The many labor protests during the industrial era and a melange of other urban riots that were violent responses to elections, abolitionists, Catholics, conscription, as well as Negroes, were very much a part of the early nineteenth century (Newman, 1979). Obviously, all revolutions fit this type of planned collective violence fueled by anger. However, in the case of revolutions, where the assumptive framework of a society is overthrown, the status of anger as a clinical and social problem diminishes and it becomes more an impetus for desired social change. This, of course, makes the point about context, values, and outcomes as relevant for judging the maladaptive versus the adaptive functions of anger.

Again, to return to the "neither necessary nor sufficient" postulate, what we usually understand as collective violence does seem to have anger as an intrinsic developmental property; I refer to Allport (1958) on the origin of riots, writing in his classic on prejudice:

⁹ Yates *et al.* fail to get the key result needed to make the inferences that they do. No significant differences were obtained in erectile responses for the rape depiction condition between insult, control, and exercise groups.

Most riots occur where there has been some rapid change in the prevailing social situation. There has been an "invasion" of a residential district by Negroes, or members of a certain ethnic group have been imported as strike breakers in a region of industrial unrest, or there has been a rapid rise in immigrant population in an unstable region. None of these conditions alone produces riots. There must be a prepared ground of previous hostility and well-formed ideas concerning the "menace" of the particular group that is attached. And as we have said, prolonged and intense verbal hostility always precedes a riot. [p. 59]

Allport gave these preconditions as steps leading to violence: (1) a long period of categorical prejudgment, (2) a long period of verbal complaint against the victimized, (3) growing discriminatory practices, (4) outside strain upon members of the in-group, (5) people getting tired of their inhibitions and reaching a state of explosion, (6) organized movements to attract the discontented, (7) social support for personal irritation and wrath, (8) some precipitating incident, and (9) social facilitation of violent outbreaks. These preconditions of Allport are consonant with the value-added theory of Smelser (1963) given earlier which utilizes concepts of structural conduciveness, strain, generalized beliefs, precipitating factors, mobilization, and social control. What can be seen is that the intensity of the hostile outburst will vary with such elements as the degree of social strain, the effectiveness with which aggrieved groups can be mobilized, and the effectiveness of counteracting social controls.

Anger arousal is manifest and functional at a number of steps in the process mapped by Smelser (1963). Among the relevant aspects of structural conduciveness is the presence of channels for expressing grievances. When avenues of protest are closed off, anger and violence are fomented. "Labor history contains numerous instances of hostile outbursts which erupt shortly after the collapse or threatened collapse of an alternate method of expressing grievances" (Smelser, 1963, p. 238). Anger is also part of rumor transmission (Allport & Postman, 1947) generated by hostile belief systems. Inflammatory rumors can be the instigation of a riot, and in the heat of the riot they may have a fanatical character. "Tortures, rapes, and murders are recounted in a frenzied manner as if to justify the violence underway and to speed up the process of vengeance" (Allport & Postman, 1947, p. 196).

Anger is of course most salient in conjunction with precipitating incidents, which bring to the fore the aversiveness of social conditions for the aggrieved persons. During the 1960s in the United States, police-citizen confrontations periodically instigated collective violence in which rioting was impulsively activated. In fact, the 1960s riots, with some notable exceptions, were triggered by routine police actions (Fogelson, 1971). For example, one of the incidents that Toch (1969) details, draw-

ing on the accounts of Conot (1969) and others, was of the traffic stop of Marquette Frye on August 11, 1965, that precipitated the Watts Riot. The initial mood of the crowd was lighthearted, as the spectators were amused when Frye was stopped for drunk driving and were supportive of the officers until they tried to put Frye in physical custody, then,

The incident had been converted into a tense, violent confrontation, and it was acquiring connotations susceptible to more general interpretations . . . Frye's situation seemed to be that of a victim, and his fate mobilized feelings of indignation founded in a common underprivileged past . . . [p. 207]

The situation degenerated as new spectators arrived who did not witness the drunk driving of Frye; an additional policeman arrived who quickly resorted to using his baton, and force was used to arrest Mrs. Frye, who had responded to the beatings of her two sons.

As a result the crowd was treated to the spectacle of an old lady forcibly pushed into a patrol car. One member of the crowd later declared, "When that happened, all the people standing around got mad" [p. 208-209]

Yet the tragic fiasco continued, as one officer claimed that a young woman had spit on him. This prompted the other officers to apprehend her, giving the crowd another dose of indignation, as the girl helplessly struggled. The crowd reacted with intensified anger, and when one man threw an empty pop bottle at a departing police car, the mass violence erupted. The next day the rioting spread through the ghetto, despite the pleas of many moderate black leaders. After 6 days, there were 34 dead, over 1000 injured, nearly 4000 arrested, and 600 buildings damaged (Boskin, 1976; Fogelson, 1971). The slogan was "Burn, Baby, Burn." The McCone Report described the behavior of the rioters as "insensate rage," although the report was soon criticized as a whitewash for failing to understand and present the range and magnitude of the resentment involved (Blauner, 1966; Fogelson, 1971; Rustin, 1966).

The impulsive versus the planned nature of the 1960s riots is not quite clear. Many accounts of the rioting in that era characterize the collective violence as spontaneous. For example, Grier and Cobbs (1968) state:

During recent riots there was a wry saying in the ghetto. "Chuck can't tell where it's going to hit next because we don't know ourselves." And it was a fact. The most baffling aspect to rioting in Newark, Detroit, and Watts was the complete spontaneity of the violence. Authorities turned to "responsible" Negro leaders to calm the black rebels and the Negro leaders did not know where to start. They were confronted with a leaderless mob which needed no leader. Every man was a leader—they were of one mind. [p. 70]

Similarly, Fogelson (1971) makes the point that the 1960s riots in the U.S. were spontaneous and unorganized, drawing contrasts to colonial

uprisings in Africa. Yet, he and others (Rustin, 1966) argue that much of the burning and looting had a deliberate quality, with considerable selection of targets destroyed or pillaged. It is partly in this vein that the critics of the McCone Commission Report challenged its portrayal of the rioters as marginal people [a concept of Allport (1956)] unable to cope with conditions of city life, or what Fogelson refers to as the "riffraff theory." On the issue of spontaneity, however, it is unclear when a riot, activated precipitously with collectively engaged impulsive behavior, should continue to be understood as a "spontaneous" phenomenon. When the rioting spans a period of several days or more and involves calculated acts of arson and selective trashings of merchants' shops, there seems little justification for the spontaneous or impulsive label.

For historical comparison and to portray some different conditions of mobilization, I refer to occurrences of mob fury described by Machiavelli (1909) in his history of Florence, particularly those surrounding the tyrannical Walter, Duke of Athens, who in 1343 was forced out of the city. This was a revolt led by the noblemen (*signori*) who originally sought and appointed the Duke to govern Florence but then saw their freedoms and the welfare of most citizens threatened by his increasing brutality and tyranny. In one incident, some of the Duke's aides were assailed on the street:

It would appear doubtless that wounds are far deeper and passions are higher when freedom has to be recovered than when it has to be defended. Messer Guglielmo and his son, not yet eighteen years of age, were delivered over to their enemies. The boy's youth and beauty and innocence could not save him from the fury of the mob, and those who could not reach to wound him when living gashed him when dead, and not content with outraging his body with their swords they tore him to pieces with their hands and teeth. And, as if they wished that all their senses should be satiated with vengeance upon their victims, after having heard their groans, seen their wounds, and tore their flesh, they gave their palates a taste, in order that internal and external senses should be satisfied. [p. 93]

The hatred and resentment of the Duke had risen to high pitch, and several conspiracies mobilized and indignation of all citizens across ranks of nobles, merchants, and artisans. Various assassination plots were abandoned, but the mobilization resulted in an armed assembly who en masse attacked the Duke's palace. "They sacked the houses of the governors, and killed every minister of the duke upon whom they could lay their hands" (p. 92). Fortunately for the Duke, the savage attack on the Guglielmi described above had a cathartic effect on the mob, who by terms of agreement allowed him to leave Florence.

Beyond this discussion it can be seen that the mobilization of collective violence may occur with a variety of anger involvements: (1) it may

be triggered "spontaneously" by an angry person or small group who have a modeling influence and thereby set in motion a contagion cycle; (2) charismatic individuals may foment collective violence through dramaturgical displays of anger and indignation (Hitler being an infamous example); and (3) persons in prescribed social roles may progressively organize or otherwise incite aggrieved groups to attack and revolt by activating anger as an energizing force.

From this presentation of anger as related to problems of aggression and violence at both the individual and collective level, I will now turn to discuss the involvement of anger in disturbances of mental health. Here anger often operates in a less salient fashion than it does with aggressive outbursts, although it may be spurious to distinguish between criminal manifestations of anger/aggression and psychiatric disorder manifestations.

IV. ANGER IN DISTURBANCES OF MENTAL HEALTH

The foregoing section discussed the involvement of anger in problems of societal violence. To distinguish mental health disturbances from criminal aggression is of course to make a distinction of convenience rather than a categorization of separate phenomena. There is obvious overlap between processes that pertain to enduring states of psychological dysfunction and the occurrence of law-violating behavior of an aggressive nature. The purpose of this section is to draw attention to the range of clinical conditions that have anger as a dynamic element and to suggest ways of understanding the anger-related psychological deficit.

Unlike anxiety and depression, for which there are a number of clinical categories, anger and aggression are not formally identified by a diagnostic category. In the case of "explosive disorder," anger and aggression are indeed intrinsic, but this is an extreme condition. This is not to say that there should be a formal classification, nor do I believe that this would be advantageous. However, the absence of a diagnostic group has had at least two consequences that have curtailed research on anger as a clinical problem. One consequence is that it is more difficult to identify target populations in treatment facilities; a second consequence is that the lack of conventional diagnostic criteria makes it difficult to obtain experimental subjects by pretesting potential samples and then selecting for extreme scores. Although there are now a number of self-report measures of anger in the literature (cf. Siegel, 1985; Spielberger, Johnson, Russell, Crane, Jacobs, & Worden, 1985), the existing scales and inventories are lacking *clinical* validation—that is, demonstration of

their relationship to serious disturbances in cognitive, affective, and behavioral functioning.

A. Personality Disorders

The overlap with forms of criminal aggression occurs conspicuously with certain subtypes of personality disorders. When enduring dispositions or trait characteristics, because of their inflexible or maladaptive nature, cause significant impairment in social and occupational functioning, they are thought to constitute personality disorders. Such conditions represent patterns of long-term functioning and are not episodic. Several of these personality disorders involve anger and aggression in varying degrees—these being the “antisocial,” “paranoid,” “histrionic,” “borderline,” and “passive-aggressive” subtypes.

The antisocial, “psychopathic,” or “sociopathic” personality is commonly linked to aggressive behavior. Monahan (1981), however, has noted that in violence studies it is often unclear what these diagnoses mean and how independent the diagnosis is from a history of criminal behavior. The essential feature of this disorder is a continuous history of behavior that violates the rights of others. Aggression is one element of a pattern of lying, stealing, truancy, fighting, substance abuse, and disrespect for authority evidenced through childhood and adolescence. The more flagrant antisocial behaviors diminish during adult life, although the deficits in interpersonal relationship skills sustain. Such persons often perceive others as being hostile toward them. This disorder is estimated to have a fairly high prevalence (about 3% of American men) and to be common among those of lower social class due to both impaired earning capacity and to social learning factors.

The relationship between psychopathy and violent crime was studied by Heilbrun (1979), who included intelligence as a moderator variable and also examined the impulsivity of the criminal act. Using MMPI and CPI indicators of psychopathy with a sample of Georgia prisoners, he found that, among psychopaths, violence proneness and impulsivity was a function of low intelligence. This suggests that cognitive, information-processing factors may be overlooked predictor variables. “A situation involving a barroom argument may represent a far different instigator of violence for the psychopath with fewer intellectual resources than for either the bright psychopath or for nonpsychopaths in general” (Heilbrun, 1979, p. 515). While attention has been given to arousal system deficiencies among psychopaths with regard to anxiety (Lykken, 1957; Schachter, 1971), little is known about anger arousal patterns, despite clinical analyses that have tracked anger tendencies develop-

mentally (e.g., Cass & Thomas, 1979). In their sample of habitual criminals, Weiss *et al.* (1960) described the chronic antisocial offenders as "constantly angry and resentful people" (p. 671).

Like the antisocial personality, the paranoid personality has difficulties forming and sustaining personal relationships and has trouble with occupational performance. Some individuals, such as Charles Manson, will display features of each of these disorder types. The paranoid personality disorder consists of pervasive mistrust, unwarranted suspicions, and hypersensitivity. The hypersensitivity is reflected in the exaggeration of difficulties, the inability to relax, a tendency to perceive slights and be offended, and a readiness for counterattack. Such individuals have rigid views and narrow expectations. They often have trouble in work settings with supervisors and peers. Unlike paranoia and paranoid schizophrenia, the paranoid personality does not have systemized delusions or hallucinations and/or other psychotic characteristics.

When the paranoid ideation is not of delusional quality and there are no elements of incoherence or hallucinations, the anger can be seen as part of long-term personality functioning. In their treatise on the anger of black people, Grier and Cobbs (1968) suggested that it was adaptive for blacks to develop paranoid personalities.

For a black man survival in America depends in large measure on the development of a "healthy" cultural paranoia. He must maintain a high degree of suspicion toward the motives of every white man and at the same time never allow this suspicion to impair his grasp of reality. [p. 161]

Thus, every white man should be seen as a potential enemy, and all social institutions viewed as malevolent. This paranoid dimension, along with doses of depression, masochism, and antisocialism, constitutes an admixture of character traits that Grier and Cobbs call the "Black Norm." Therefore, they maintained that to determine a black person's degree of mental illness the "Black Norm" should be subtracted from whatever else is observed. This portrait of suspiciousness of the social environment thought to be necessary for survival, coupled with smouldering anger and resentment, is a special case description of the paranoid personality and can be differentiated from more serious conditions of paranoid impairment. One might hope that these authors would no longer be inclined to advocate its adaptive value and that the reasons for their original assertion have been remedied.

Another personality disorder involving anger is the "borderline" type. The term was originally used to represent cases what were intermediate to neuroses and psychoses (Stern, 1938). Presently, the diagnostic category embraces a varied group of patients who show a range of

pathology more severe and widespread than neurotic and character disorder conditions (Abend, Porder, & Willick, 1983). For the borderline personality, mood is often unstable, and intense, inappropriate anger is often part of the mood fluctuations. Among the important diagnostic criteria (DSM III) are a lack of control of anger, evidenced by frequent displays of temper, and engaging in physically self-damaging behavior. Borderlines present multiple symptoms and are known to be difficult patients. Psychoanalysts see them as having strong and early transference reactions characterized by antagonism and irritability, as anger toward the therapist is a recurrent phenomenon (cf. Abend *et al.*, 1983). With high degrees of distress related to matters of identity, self-image, and goals, coupled with mood instability, borderlines have serious problems with interpersonal relationships. They are prone to overreact to criticism, frustration, and disappointment. Improving the person's frustration tolerance and the ability to regulate their level of arousal when angry would be important therapeutic accomplishments. Self-monitoring of "countertransference" reactions of anger is evidently a matter for therapists to give attention.

Two other personality disorders also entail anger components as diagnostic features. Angry outbursts or tantrums are part of the dramatizations found in the behavior of the "histrionic personality." This condition is marked by exaggerated expression of emotion and overreaction to minor events, often evidenced in anger displays. In contrast, the "passive-aggressive personality" applies a style of indirectly expressed resistance or opposition. "Individuals with this disorder habitually resent and oppose demands to increase or maintain a given level of functioning. This occurs most clearly in work situations, but is also evident in social functioning. The resistance is expressed indirectly, through such maneuvers as procrastination, dawdling, stubbornness, intentional inefficiency, and 'forgetfulness' " (APA, 1980, p. 328). The disorder is so named because it is inferred that such persons are passively expressing covert hostility. The key feature of the personality is obstructionism to the demands of others (Burns & Epstein, 1983). The person's assumptive framework prominently includes notions of entitlement, which can be understood in terms of inflexible expectations and appraisals (Novaco, 1979). Such individuals are also likely to arouse anger in the therapist. In this regard, Simon (1985) differentiates the "obnoxious type," who is sarcastic and triumphant in proving the therapist wrong, from the "innocent type," who is inclined to cancel appointments and forget homework. Some qualities of passive-aggressive personality (ineffectiveness; resentment in response to frustration) were observed by Weiss *et al.* (1960) and Blackman, Weiss, and Lamberti (1963) in their sudden

murders, along with features of the "schizoid personality" (emotional coldness, isolatedness, difficulties in forming close relationships, and difficulties in expressing hostility).

B. Childhood and Adolescent Disorders

The most prominent diagnostic group involving problems of anger and aggression among children and adolescents is "conduct disorder." By DSM III criteria, the essential characteristics of this condition are repetitive and persistent conduct that violates the basic rights of others or fundamental societal rules. There are four subtypes of this disorder arrayed on the two dimensions of socialized-undersocialized and aggressive-nonaggressive. The socialization dimension pertains to the degree of social attachment, indicated by peer group friendships, altruism, capacity for guilt or remorse, loyalty, and concern for others. The aggressiveness dimension concerns repetitive acts of destruction against persons or property and/or thefts outside the home involving coercive action. The associated features of this disorder include family problems, poor academic performance, substance abuse, attentional difficulties, externalizing of blame, mistrust, and low self-esteem—despite an aura of toughness. "Poor frustration tolerance, irritability, temper outbursts, and provocative recklessness are often present" (APA, 1980, p. 46). The most problematic subtype is the undersocialized, aggressive subtype, and if their adjustment difficulties continue into adulthood they may later be diagnosed as "antisocial personality disorder."

The work of Patterson and his colleagues is foremost in the area of assessment and treatment of conduct disorders (Patterson, Cobb, & Ray, 1972; Patterson, Ray, & Shaw, 1968; Patterson & Reid, 1973). This work views aggression as a high-amplitude coercive response that is the outcome of specialized socialization, whereby the reactions of adults and other children provide reinforcement contingencies that shape aggressive behavior. Recent studies (e.g., Patterson, Chamberlain, & Reid, 1982) have focused on parental use of effective disciplines to reduce the coercive "bursts" or escalating irritable reactions of the aggressive child. The stability of aggressive reaction patterns has been studied extensively by Olweus (1978, 1984), who has found that the stability or continuity is much greater than previously believed, but he has generally not made observations about dimensions of anger. Recently, Patterson (1985) has used his microanalytic techniques to study the affective reactions within mother-child interactions. He has found that mothers coded high on negative affect are prone to respond with irritability in counter response

to the child's deviant behavior and to persist in being irritable, regardless of the child's reaction.

A predisposing factor for conduct disorders is "attention deficit disorder," the essential features of which are inattention and impulsivity that is developmentally inappropriate. The associated features of this condition include "obstinacy, stubbornness, negativism, bossiness, bullying, increased mood lability, low frustration tolerance, temper outbursts, low self-esteem, and lack of response to discipline" (APA, 1980, p. 42). There has been wide agreement that attention deficit, hyperactive children have difficulties with anger and aggression. Recent research on hyperactivity by Hinshaw *et al.* (1984) has shown that cognitive-behavioral interventions, based in part on Novaco's (1979) methods, significantly enhanced general self-control and specific coping strategies for dealing with anger provocation.

Other childhood-adolescence disorders involving anger/aggression components include "schizoid disorder" and "oppositional disorder." The basic characteristic of schizoid disorder, a relatively rare condition, is the incapacity to form social relationships, absent other impairments or diagnostic conditions. Associated with their social ineptitude and aloofness, "these children may be belligerent and irritable, especially when demands for social performance are made. They are erratically sensitive to criticism, displaying occasional outbursts of aggressive behavior" (APA, 1980, pp. 60-61). For oppositional disorder, the key element is "a pattern of disobedient, negativistic, and provocative opposition to authority figures" (APA, 1980, p. 63). The oppositional attitude is persistently maintained despite its impact on the child's interests. Temper tantrums are the likely result of thwarting the child, who is also inclined to use procrastination and passive resistance as well as negativism and stubbornness in bucking external authority. This condition is differentiated from the more serious "conduct disorder" in that it does not extend to major rule violations, persistent lying, or to acts of physical aggression.

C. Organic Mental Disorders

Mark and Ervin (1970) found some cases of focal brain disease in the hypothalamic, limbic, and temporal lobe regions among persons showing violent "dyscontrol." More generally, anger, aggression, and irritability are associated features of organic brain syndromes and other organically based dysfunctions. This may be the result of damage to the brain or may be a reaction to the cognitive impairment. Paranoid attitudes and temper outbursts may occur, sometimes accompanied by

physical aggression, and there may be a general decrease in impulse control. The occurrence of inappropriate behavior may also in turn lead to anger experiences when the person's actions are provoking and elicit retaliation.

One famous case of organic dysfunction with violent consequences was that of Charles Whitman (cf. Sarason & Sarason, 1980). Whitman had recurrent severe headaches and was concerned about intrusive thoughts and violent impulses. He began to get psychiatric care but to no avail. After killing his wife and mother, he went to the top of the tower overlooking the University of Texas campus and shot 38 people with a high-powered rifle. His autopsy found a highly malignant brain tumor.

Irritability and anger are found in "delirium" as part of a constellation of variable emotional disturbances. In "dementia" paranoid ideation leads to false accusations and to verbal or physical attacks. This disorder occurs predominantly among the elderly and commonly involves irritability and cantankerousness. In addition to these organic brain syndromes, the "organic personality syndrome" also involves anger. For this condition, the cognitive impairment is less severe and the personality change may primarily be suspiciousness and paranoid thinking. "A common pattern is characterized by emotional lability and impairment to impulse control or social judgment. The individual may be belligerent or have temper outbursts and sudden bouts of crying with little or no provocation" (APA, 1980, p. 118).

Severe head trauma can also cause brain damage with associated impulsivity and anger outbursts. Lira, Carne, and Masri (1983) successfully reduced the anger outbursts of a patient having a moderate left hemiparesis from a motorcycle accident. They used the stress inoculation procedures developed by Novaco and obtained strong effects maintained at a 5-month follow-up.

Acute brain syndromes can be induced by chemical substances. The associated features involving anger and aggression are determined by the particular substance used, the environmental circumstances, the person's biological condition and personality, as well as by expectations of substance effects. The disinhibition of aggressive impulses is a common feature of intoxication due to alcohol, barbiturates, cocaine, and amphetamines. Delusional disorder linked to amphetamine use also involves suspiciousness and paranoia that can subsequently lead to violence against perceived enemies. Phencyclidine (PCP) intoxication involves high-amplitude responses coupled with an imperviousness to pain which make for unpredictability as well as belligerent, assaultive behavior. There are also withdrawal conditions comprising substance-

specific syndromes, and irritability is a common feature of withdrawal syndromes, including nicotine withdrawal.

D. Paranoid and Psychotic Disorders

Persecutory delusions are the essential features of the paranoid disorders which commonly involve anger and resentment and which can lead to violence. The social isolation and suspiciousness associated with paranoia engender cognitive structures or perceptual sets that prime the individual for anger experiences. Cameron (1943), in his classic article on the "paranoid pseudo-community," construed paranoia as an outcome of inadequate social learning and consequent deficits in social skills that underlie interpersonal communication. Idiosyncratic symbolic processes do not operate as communication in public or shared exchange, and hence do not require the same completeness, clarity, and definition. Relevant to anger, Cameron (1943) stated:

The high susceptibility of some individuals to slights—intentional, unintentional, or imagined—grows out of an unworkable attitude they have toward themselves as social objects; either they have no stable and dependable attitude, or it is deprecatory or condemnatory and hostile. This makes them especially vulnerable to delusional development . . . the crucial thing with certain individuals is their habitual inability to share their growing suspicions an airing, to set them out before another and so make them objective. It is not enough that they are suspicious, they keep their suspicions to themselves . . . [p. 34]

Because of poor role-taking ability, the paranoid person reacts to slights or conflicts "without adequate give-and-take in his communication with others and without competence in the social interpretation of motives and intentions" (Cameron, 1943, p. 35). Paranoid persons rarely seek treatment on their own; typically they are brought for therapy by relatives or the criminal justice system as a result of angry behavior. Recall, however, the argument of Grier and Cobbs (1968) about black rage, which points a finger at prevailing societal conditions rather than social and cognitive skills. They assert that paranoid symptoms are significantly greater among mentally ill blacks than among mentally ill whites. To be sure, the process is a transactional one, involving multiple feedback loops between person and environment.

Paranoid disorders are distinguished from paranoid schizophrenia, a psychotic condition, by the former having delusions that are more systematized and by the absence of hallucinations and incoherence that reflect psychosis. Paranoid schizophrenics are, however, angry and argumentative and do act aggressively. Another psychotic disorder, "brief

reactive psychosis," which involves a sudden onset (typically in response to a trauma) and then a return to prior functioning, may also include anger, aggression, and suicidal behavior.

E. Affective Disorders

Manic episodes often are accompanied by anger, and depression also can involve anger and hostility as part of the negative perceptual system. The affective disorders represent serious disturbances of mood which pervade the individual's life experience. In the case of mania, the mood is labile and can shift rapidly to anger. "Although elevated mood is considered the prototypical symptom, the predominant mood disturbances may be irritability, which may be most apparent when the individual is thwarted If the mood is more irritable than expansive, there may be complaints, hostile comments, and angry tirades" (APA, 1980, pp. 206-207).

Psychodynamic theories of depression (Freud, 1917/1963; Menninger, 1938; Storr, 1968) have emphasized the role of retroflected anger or "hostility turned inward" as an etiological process. Grier and Cobbs (1968) portray the depression of blacks in precisely these terms. Empirical analyses of this hypothesis have provided little support for the psychodynamic proposition. Research with psychiatric patients (Schless, Mendles, Kipperman, & Cochrane, 1974; Weissman, Klerman, & Paykel, 1971) has found *both* inwardly and outwardly directed hostility to be associated with depression. More parsimonious accounts are now more widely accepted, such as that of Hollon and Beck (1979), which asserts that the negativistic and hostile features of depression are best understood as reflecting a belief in personal incompetence, associated with other cognitive distortions. Depressive episodes do involve psychomotor agitation, brooding, and irritability. Among adolescents, highly negativistic and antisocial behavior can occur, accompanied by sulking, grouchiness, and withdrawal. Irritability and anger are typically expressed toward the parents or caretakers. Depressed persons with anger problems have been successfully treated by the stress inoculation method (Novaco, 1977).

Freud's view that the self-reproaches of the melancholiac are really reproaches against a loved one redirected to the patient's own ego followed from observations made about mourning and grief. The bereaved person was seen to have a reserve of unconscious anger toward the deceased, which could not be allowed into conscious experience, hence the inverted hostility. Lindemann's (1944) study of bereaved patients found irritability and anger to be normal reactions. However, he also

described "morbid grief reactions" in which the grief process was distorted, involving intensifications of hostility across social relationships and furious hostility toward specific persons. Longitudinal research by Clayton and Darvish (1979) on the course of depressive symptoms following the stress of bereavement has found that, for those who remain depressed after 13 months, feelings of anger about the death intensified. The retention of irritability and anger was especially manifest for the younger bereaved (≤ 45 years of age). However, these authors found that the angry feelings were frequently directed at the deceased, the hospital, and the physician; seldom were they directed at the survivor.

F. Posttraumatic Stress Disorder

Exposure to traumatic events, such as military combat, personal assault, or rape, can elicit this syndrome, whose characteristics involve reexperiencing the trauma (by intrusive recollections of the event or recurrent nightmares), an emotional blunting or "psychic numbing" reflecting an estrangement from the world and personal relationships, and a hypersensitivity to external stimuli shown in an exaggerated startle response. "Increased irritability may be associated with sporadic and unpredictable explosion of aggressive behavior, upon even minimal or no provocation" (APA, 1980, p. 237). Observations of traumatic neuroses following World War I led Freud (1920/1959) to postulate his concept of "repetition-compulsion."

"Posttraumatic stress disorder" has come into prominence as a diagnostic category following the Vietnam war. However, in the earliest work on psychopathology resulting from combat, Kardiner and Spiegel (1947) wrote about the tendency to aggression and violence as being

. . . one of the most common complaints of traumatic neuroses. Most patients have complete insight into this characteristic, are troubled by it, and want relief from it. It is, of course, intimately related to the irritability and hypertoxicity of the entire muscular system. The aggression may show itself in the tendency to "tempers." Easily aroused to anger, these patients are very prone to motor expression. They either break or tear objects in these fits of temper, or strike the people who happen to be around them. This symptom is subject to wide variations. If the outburst is accompanied by loss of consciousness, the patient is usually dangerous; assault in this state is not uncommon. Often these patients injure themselves unintentionally The aggressiveness of the traumatic neurotic is not deliberate or premeditated. His aggression is always impulsive The sadomasochistic complex is related to the irritability, the incapacity to analyze stimuli in the environment. [pp. 212-213]

Explosive irritability and unwarranted rage were identified by Kardiner and Spiegel as a stage in the progressive development of incapacitating breakdowns during warfare, which begin with poor appetite and carelessness, then involve irritability and exaggerated reactions of rage, and culminate in freezing, sleep disturbances, and being terrified of one's own artillery.

The psychological ambience of combat associated with the Vietnam War had a particular negative effect on veterans who began to manifest "delayed stress responses" (Horowitz & Solomon, 1975). The common themes of the postcombat syndrome are guilt and self-punishment, feeling scapegoated, indiscriminate rage, "psychic numbing," alienation, and doubt about one's ability to love and trust others (Shatan, 1978). The delayed stress syndrome is a multifaceted condition involving recurrent intrusive thoughts, images, and nightmares, intense emotional reexperiences, depersonalization and denial, impaired self-concept, reactive rage, and fear of losing control over destructive impulses. Occurrences of frustration, anger, aggression, and hostility are a prominent part of the symptomatology. Often, it is the experience of rage and the fear of one's own destructive impulses that prompt the individual to seek treatment. A more extensive discussion of the involvement of anger and aggression in the posttraumatic stress disorder is given in Novaco and Robinson (1984).

G. Dissociative Disorders

Anger has been implicated in cases of dissociative disorders where there is an alteration in the integrated components of consciousness, identity, and behavior. Such disruptive alterations are reflected in dissociative conditions of amnesia, multiple personality, and fugue.

Psychogenic amnesia occurs in conjunction with traumatic events, including warfare. Salley and Teiling (1984) reported a case of a Vietnam veteran with dissociated rage attacks. There was complete retrograde amnesia for violent episodes of up to 30 minutes in length. Guilt over combat atrocities was inferred to be the basic trauma that induced raging, explosive impulses.

Child abuse can be a predisposing trauma that leads to multiple personality. This was seen in the case of "Sybil," popularized in book and film. Similarly, the inability to express anger toward significant others was judged to cause personality splitting in an interesting case reported by Winer (1978). Repeated experiences of victimization, rejection, abuse, and molestation during childhood by a variety of people induced a dissociative reaction at age 21 in a woman whose new personalities were

malicious, hateful of men, and seductive. Hypnotherapy that was focused on the central dynamic of the inability to handle anger proved successful.

H. Explosive Disorder

There are a number of impulse control disorders not classified elsewhere in the diagnostic system (as are, for example, conduct disorder or antisocial personality). Among these added impulse control dysfunctions is "explosive disorder" ("intermittent" and "isolated"). This condition is very rare, but when it occurs is most likely found among men between 20 and 40 years of age. Toxic substances (e.g., alcohol) and conditions conducive to brain dysfunction (e.g., head trauma) can act as predisposing factors. "Intermittent explosive disorder" is a diagnosis applied when there have been several discrete episodes of out-of-control aggression, and "isolated explosive disorder" is used when there is a single discrete episode. "(W)ith no or little provocation the individual may suddenly start to hit strangers and throw furniture. The degree of aggressivity expressed during an episode is grossly out of proportion to any precipitating psychosocial stressor" (APA, 1980, pp. 295–296). These symptoms appear quickly and remit shortly after the episode. Importantly, there are no problems with impulsivity or aggression between episodes (as is the case for "antisocial personality"). Sometimes the explosive episode is signed by prodromal sensations, and hypersensitivity to external stimuli is often reported.

I. Summary

In this section anger and aggression have been delineated as they occur with regard to various diagnostic categories of clinical disorder. Although anger may have adaptive functions for human behavior pertaining to performance, relationships, and coping, it is nevertheless associated with many dysfunctional syndromes. Given this background, a view of anger will be presented based on concepts of human stress, arousal, and cognitive mediation.

V. ANGER AND HUMAN STRESS

As can be seen from the foregoing sections, anger clearly activates aggressive behavior and has demonstrable links to problems of physical health and psychological adjustment. As a manifestation of psychological stress, chronic anger reactions can be induced by enduring contex-

tural conditions, such as long distance commuting or work pressures, particularly when these ambient conditions shape antagonistic cognitive dispositions. Persons who are prone to provocation not only may suffer impairments to their own well-being, but may also negatively affect their families and work organizations.

Extensive research has indeed shown that anger arousal increases the probability of aggression (Rule & Nesdale, 1976), although, as has been developed here, it is neither necessary nor sufficient. Yet, to a considerable degree, acts of aggravated assault and homicide involve an angry perpetrator. Both premeditated and impulsive violence entail anger. Instances of criminal assault often consist not of discrete events, but of an escalating sequence of antagonistic moves (Toch, 1969). Domestic violence, whether between spouses or directed toward children, typically is prompted by unmanaged anger. Furthermore, behavior patterns of anger and aggression can be transmitted by subcultural influences. There is little doubt that interpersonal violence ranging from altercations on freeways to assassinations of government leaders is in large measure driven by the forces of anger.

In addition to the aggression-inducing effects of anger at the interpersonal level, violence at the societal level is fomented by the anger that exists among communities. Urban rioting has arisen from the anger of disadvantaged minorities. The racial rioting in the 1960s and the occurrence of ongoing hostilities, as indicated in the United States by the turmoil in Miami and in continuing conflict in South Africa, is unmistakably rooted in the anger of black people. While enraged communities can often be driven to destructive actions, it is also the case that such anger can promote group unity, as in the United States' response to the embassy takeover in Tehran (on which President Carter failed to capitalize), and can energize constructive social action, as it did with civil rights legislation. These latter examples again illustrate that anger can have adaptive functions.

The association of anger with aggression engenders the belief that anger is negative or harmful because it is expected to result in harm-doing. This expectation is fortified by our awareness of incidents in which fits of rage have had tragic consequences. The view of anger as a passion by which the person is "gripped," "seized," or "torn" is in fact rooted in ancient philosophical beliefs about the nature of emotion (Averill, 1974). Becoming angry seems to signify that one is out of control, driven by uncivilized forces that ultimately must be checked. Anger is perhaps the prototype of this view of emotions as passions.

There are several difficulties with viewing anger as a passion which takes control of the personality and leads to aggressive acts. One prob-

lem is that it implies that anger is not accompanied by reason. However, cognitive operations are centrally involved in the instigation of anger, as well as in its maintenance and dissipation. Anger is by no means a reflexive, automatic response to provoking events. Another difficulty is that we may all too readily attend to the negative aspects of anger and overlook its positive functions. The varied functions of anger in affecting human behavior indicate that anger arousal indeed has adaptive value. A third difficulty is the emphasis that has been given to aggression and its consequences when gauging the harmful effects of anger. Proneness to anger can become a chronic problem for the individual, and the injurious effects of chronic anger go considerably beyond the experience of an unpleasant emotional state that induces aggressive behavior. Many negative effects can result from anger proneness, including impairments to psychological and physical well-being. A fourth problem of anger viewed as a passion is that it is conceived as an emotional state evoked in response to proximate situational events, such as frustrating, annoying, unjust, or insulting occasions. This overlooks the possibility that enduring contextual conditions or sequential circumstances may have a cumulative effect of elevating general arousal or tension levels so as to prime the person to experience anger. In this latter regard, Zillmann and Bryant's (1974) excitation transfer concept is highly relevant.

The perspective that I have advocated for understanding anger is the stress theory framework (Novaco, 1979), and the therapeutic interventions that I have developed for problems of anger are conceptually and procedurally consistent with this view of anger as a stress-related phenomenon (cf. Novaco, 1985). To briefly expand upon this position, I suggest here that anger can be seen as an emotion-action complex that has several stress-related dimensions: (1) it has properties of a stress reaction or outcome of stressor exposure; (2) it is a component of a stress coping style with functional deficiencies; and (3) it operates as an internal stressor that causes wear and tear on the system. These, of course, are transactional characteristics, indicating that measures of anger would vary with regard to the property or function being examined. Although space does not allow me to develop these points here, some brief exposition can be given.

Anger can be understood as an affective stress reaction. That is, anger arousal is one kind of response that occurs in conjunction with exposure to environmental demands or stressors. Stress reactions consist of physiological disturbances, negative affect, and impairments to cognitive and behavioral functioning. They vary in their magnitude and extension, which determine their severity. One defining property of anger is physi-

ological arousal, and it is unquestionably the case that arousal is activated by exposure to stressors, such as noise, heat, traffic congestion, crowding, difficult tasks, and high-pressure job environments. The importance of this is that both acute and prolonged exposure to such conditions may induce arousal that is experienced by the individual in conjunction with cognitions of antagonism and the experience of events that pull for the cognitive label "anger." Exposure to certain stressors may produce arousal or excitation that decays slowly, leaving a residual that can subsequently transfer to other experiences (Zillmann, 1971). This residual arousal then adds in a nontrivial way to arousal induced by subsequent events appraised in terms of anger. Thus, the activation of anger should be assessed in terms of contextual conditions, as well as more immediate identifiable provoking events. As a stress response to environmental demands, anger can be seen as a product of overload. That is, it reflects a condition that demands are exceeding resources for coping. It indicates that performance proficiencies or problem-solving capacities have been strained.

Coping with stress may involve dysfunctional behavior patterns, including anger as a dynamic component. A coping style of impatience, antagonism in response to aversive events, low frustration tolerance, and unrealistic expectations of oneself and others can involve anger as a prominent feature. Anger may be part of an ingrained personality style that takes a combative orientation to perceived threats and challenges. The involvement of anger in the coronary prone behavior pattern (Type A), has been consistently observed clinically, but experimental analysis has been sparse. Some experimental evidence of the aggressiveness of Type A's has been reported (e.g., Carver & Glass, 1980; Glass, 1977), and other research has linked catecholamine responses to provocation (Glass, Krakoff, Contrada, Hilton, Kehoe, Mannucci, Collins, Snow, & Elting, 1980). The self-report measures of Type A, however, fail to assess the prominent stylistic attributes that are the core focus of the structural interview, which to see Ray Rosenman conduct it is to recognize it as a provocation procedure. While the association between anger and heart disease remains to be untangled, there is good reason to believe that some relationship exists, particularly in view of the longitudinal research of Barefoot, Dahlstrom, and Williams (1983) and Williams, Haney, Lee, Kong, Blumenthal, and Whalen (1980). On a more literary, albeit tragic note, Dr. John Hunter, a famous eighteenth century British surgeon, once remarked, "My life is in the hands of any rascal that chooses to annoy me . . ." He died suddenly while attending a hospital board meeting (Jenkins, 1978). While this point about stress coping style is being illustrated here by the Type A construct, it could alternatively be

done with other dysfunctional syndromes discussed earlier, such as paranoid, antisocial, and conduct disorders.

The consequences of anger must be understood as much broader than the activation of aggressive behavior. In everyday life, only a small proportion of anger instigations result in overt aggression toward others. Such occurrences do have important societal significance. But the point is that by emphasizing the anger-aggression relationship we may overlook more subtle and long-term costs associated with anger problems. Psychological research has commonly conducted its analysis of anger by beginning with the exposure to some provoking event and ending with the subject's more or less proximate response to that event. Preoccupation with the aggression-inducing properties of anger has obscured the understanding of anger not only with regard to its determination by enduring contextual conditions, but also it has distracted attention from adverse health and adjustment effects that may result from anger as a customary style of coping with life demands. The activation of anger operates as an internal stressor that causes wear and tear on bodily systems. These may be short-term interferences with functioning or long-term impairments to well-being.

Concepts of stress and adaptation can be useful for understanding the enduring or long-term effects of anger. Recent research is finding that anger is associated with health, particularly in the area of cardiovascular disease (Chesney & Rosenman, 1985). Early writings in the field of psychosomatic medicine (Alexander, 1939; Miller, 1939; Saul, 1939) implicated suppressed anger in the development of essential hypertension. Large-scale epidemiological research (Gentry, 1985; Harburg, Erfurt, Hauenstein, Chape, Schull, & Schork, 1973; Haynes, Levine, Scotch, Feinleib, & Kannel, 1978) has indeed found suppressed anger to be associated with elevated blood pressure. Although the nature of the relationship between anger and hypertension is neither simple nor clear, there is some reason to believe that one's style of coping with provocation may have some etiological significance. It has consistently been found in experimental studies that blood pressure increases when subjects are made angry. Across many published experiments, increases in systolic pressure of 10–21 mm and in diastolic pressure of 3–22 mm have been reported in conjunction with anger arousal manipulations. Recovery time to baseline levels has also been found to be prolonged when anger is not expressed. However, what is not clear is how transient increases in blood pressure become converted to chronically elevated levels. Despite some early hypothesizing about this question (Buss, 1961), neither the biological nor psychological mechanisms have been identified.

Now that attention is beginning to be given to anger with regard to physical health disorders, hopefully its involvement in psychiatric disorders will soon be addressed. The earlier exposition was intended as a step in that direction, and it will be exciting to pursue this line of inquiry. The development of techniques of assessment will be an important task in this process. Hecker and Lunde (1985) have suggested a preliminary typology for chronically hostile patients, but their framework is limited to dimensions of expressiveness.

The stress framework provides theoretical guidelines for the disaggregation and analysis of contextual factors (environmental demands and moderators) that may act as determinants of anger and aggression, as well as stipulates the significance of internal processes of arousal and cognition. Moreover, the stress model can inform us of the extended and unanticipated costs of anger proneness. Stress research can improve our identification of the range of circumstances that engender anger and the varied impacts that anger can have on well-being.

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The Role of Fantasy and Other Cognitive Processes in the Regulation of Children's Aggression

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I. INTRODUCTION

The varied and complex constellation of behaviors that constitute human aggression can be examined from a number of different perspectives. Behavioral scientists have at various times focused on biological factors, motivational and emotional influences, social learning factors such as reinforcement and modeling and, most recently, cognitive variables and processes. These diverse influences are not, of course, mutually exclusive. As a rule, they are interdependent, interactive, and reciprocally reinforcing. For example, an aggressive response elicited by brain stimulation is in part dependent upon the organism's history of aggression in that environment as well as upon the particular area of the brain affected (Delgado, 1979). The effects of cognitive factors on aggressive behavior are similarly reciprocally dependent on learning histories and motivational dispositions. Thus, while this article is addressed to the role of cognitive factors on aggression, particularly how children's fantasy or imaginative competencies may contribute to the regulation of aggressive behavior, it is recognized that other processes and factors are no less important and, in many circumstances, may be more important.

The article is divided into two sections. In this introductory section, a dynamic model of the antecedents of aggressive behavior will first be considered. The mediating role of cognitive factors in regulating the impact of these antecedents on various facets of aggression will then be addressed. In the second section, an experimental study entailing the training of a particular kind of cognitive process—fantasy and imagination—will be presented. One set of data of special interest is that bearing on the effects of fantasy training on aggressive behavior. In addition, data pertaining to the interrelationships among various measures of fantasy and of the fantasy measures to social behaviors and to other cognitive factors will be reviewed.

The term “cognitive” is itself multifaceted, embracing a number of different kinds of activities—perceptual, linguistic, inferential, and mnemonic, to note the more salient ones, and none of these is by any means singular or unidimensional. To discuss fully the diverse cognitive factors that can affect aggressive behavior is beyond the scope and interest of this article. However, before addressing the relationship of fantasy processes, one subset of cognitive processes, to the management of aggression, a more general explication of the diverse functions of cognitive processes in relationship to other mechanisms affecting aggression in the context of a dynamic model of aggressive behavior would be useful. The model and explication will focus on the *regulation* of aggressive behavior rather than on the antecedents of aggressive behavior as such. Regulation implies that there is some response disposition to aggression that requires control, e.g., the evocation of anger or of aggressive motivation and the “control” of the subsequent behavioral response. In this instance, we will extend the notion of what is being regulated to include stimulus situations that, through socialization or the nature of the human organism, have a high probability of eliciting anger and/or aggressive motivation or that greatly lower the threshold for aggressive responding. We will first consider the different ways in which varied elicitors of aggression can influence aggressive behavior.

A schematic model of these dynamics is presented in Fig. 1. A distinction is made between anger, aggressive drive, aggressive response threshold, and manifest aggressive behavior. Anger refers to the constellation of heightened autonomic activity, physiognomic expression, and oral and motor reactions (shouts, thrashing, etc.) that are used to distinguish the affect of anger from other emotions (Charlesworth & Kreutzer, 1973). While there is some question about the presence of anger in very young infants, there is a good deal of evidence that anger in infants can be reliably discriminated before the end of the infant's first year. Aggressive drive is used to designate a motivational state such that

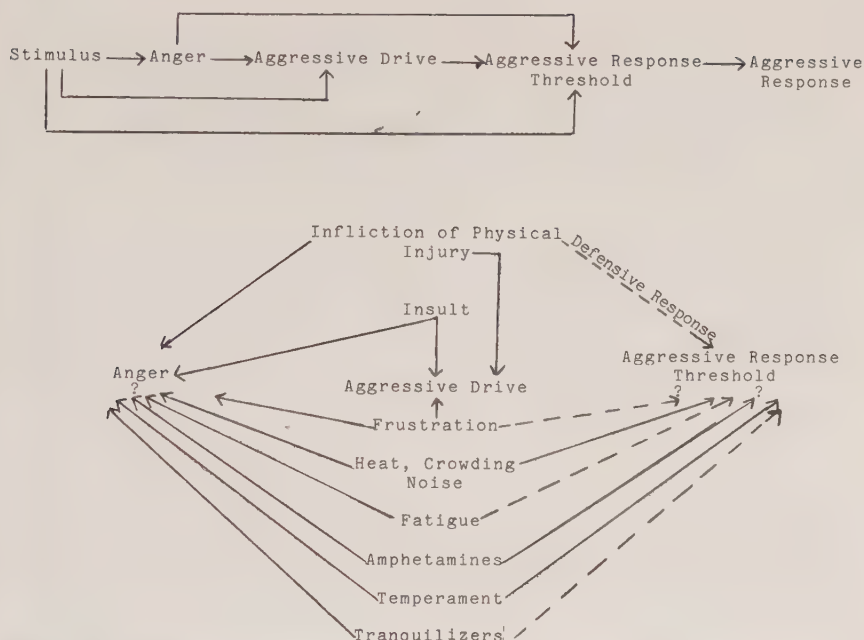


Figure 1. Schematic model of dynamics of aggressive behavior as a function of some probable elicitors.

the organism strives for an aggressive goal; that is, the goal response that terminates the behavioral sequence is the infliction of injury to some person or object. A distinction is made between the aggressive response threshold and the actual aggressive response. This distinction is especially pertinent to the concepts of regulation and control in that anger and aggressive drive may contribute to a heightening of the aggressive response threshold while the individual can still "choose" to respond in a nonaggressive manner. There are factors that can affect the aggressive response threshold without affecting anger or aggressive drive. Thus, modeling and reinforcement of aggressive behavior can contribute to significant individual differences in aggressive response threshold independent of anger and aggressive motivation. There may be temperament differences pertinent only to the facility and likelihood of making an aggressive response. Certain environmental stimuli, sometimes referred to as "releasers," may also operate similarly, particularly in the case of defensive aggressive behaviors. These releasers have been extensively observed in studies of animal species, and human counterparts may yet be determined, although, for the present, there is no consensus

on what may constitute for humans releasers of aggression. We refer here to basically innate releasers in contrast to learned releasers, as in the Berkowitz and LePage (1967) weapons effect. More generally, from a conceptual standpoint, it is useful to think of anger and aggressive drive as factors influencing the aggressive response threshold along with other factors such as releasers, past history of reinforcement, and temperament.

The first sequence denotes the different routes through which stimuli can elicit aggressive behavior. The arrows indicate that a stimulus can evoke aggressive drive without eliciting anger, that anger operates independently of aggressive drive, and that stimuli can directly elicit aggression without anger or aggressive motivation (drive) intervening. These theoretical propositions have varying degrees of empirical support, and the utility of these distinctions is an empirical issue. At the same time, even this diagram is an oversimplification of the dynamics of the behavioral sequence. The influences are depicted as unidirectional. However, anger and aggressive drive can influence the sensitivity of the organism to particular stimulus events and the kinds of associations made to and inferences drawn from these events. And the sequence is further complicated by inhibitory and other factors that can intervene at any point in the hypothesized chain. Nevertheless, the sequence as depicted serves as a useful context in examining the second diagram in the figure, in which different elicitors are described as differentially affecting anger, aggressive drive, and aggressive response threshold. Thus, factors that primarily modify anger are likely also to influence aggressive drive and the aggressive response threshold through the mediation of anger, while factors that primarily affect the aggressive response threshold will generally have little or no influence on anger and aggressive drive.

The dotted lines denote that the influence is hypothesized to be a weak one, while the question mark indicates uncertainty regarding the strength and pattern of the influence. Thus, the diagram depicts frustration, defined as interference or blocking of a behavioral sequence, as having (under specified circumstances) a direct effect on anger or on aggressive drive and a weaker and uncertain influence on the aggressive response threshold. The latter refers to the possibility that repeated frustration may lower the threshold for responding aggressively even though the individual may not be angry or motivated to injure or punish the frustrating stimulus. Tranquilizers are seen as influencing the emotional response of anger (dampening the affective reaction) and possibly having a modest, direct influence on the aggressive response threshold. The question marks in regard to the amphetamines are intended to

convey uncertainty as to the mechanisms through which amphetamines exacerbate aggressive behavior.

It may be noted that insults, unlike the other factors noted, are hypothesized to influence the aggressive response threshold only through the mediating processes of anger and aggressive drive. Being subjected to physical injury is portrayed as having effects similar to those of insults except for the hypothesized elicitation of defensive aggressive reactions. It may be that physical attack has properties comparable to an innate releaser of defensive aggressive responses and may facilitate such responses even in the absence of anger and hostility. It should be understood that the differential effects depicted in the diagram are hypotheses for which in some instances there is empirical support, while in others, suggested influence patterns have not yet been explored.

Cognitive Regulators

The schematic model presented in Fig. 2 provides a context for analysis of the role of cognitive factors in the regulation of aggression. In the figure are enumerated three kinds of antecedents of aggression. For each category, several examples are offered of cognitive mediators that can mitigate the impact of these stimuli on aggressive behavior—either through reducing anger or aggressive drive or through raising the aggressive response threshold. The arrows are intended to convey major mitigating effects, while the question mark conveys uncertainty as to the nature of the effect. While in some instances the cognitive mediator is appropriate primarily in regard to the antecedent under which it is listed, in other instances the cognition is applicable to a wide range of antecedents. Thus, the response "I'll show them," appropriate to some insults, is inapplicable to physical attack or heat, crowding, etc. However, "counting to ten" would be applicable to all of the antecedents in Fig. 2.

For the first antecedent (A), infliction of physical injury, two examples of cognitive mediators are provided. The arrows suggest that each reduces the likelihood and intensity of an aggressive response through lowering the level of anger. A secondary direct effect on aggressive drive is also postulated. It will be noted that neither mediator is postulated to alter any defensive aggressive response to the attack. The statement, "It was unintentional," refers to a major cognitive mechanism that has been shown to influence the aggression-instigating properties of physical injury and also of frustration. Early studies employing simulated situations with adults (Pastore, 1952) and adolescents (Graham, Charwat,

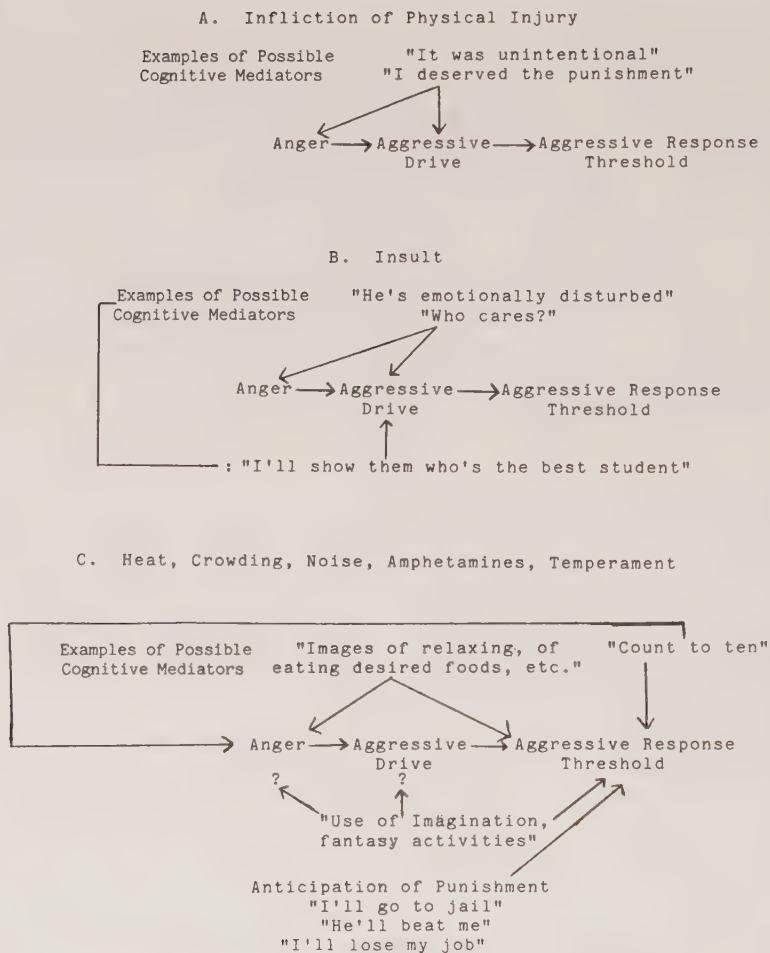


Figure 2. Schematic model of the role of cognitive factors in the role of aggression: some examples.

Honig, & Welty, 1951) indicate significantly greater aggression in response to frustration portrayed as intentional rather than accidental. There are developmental changes in the role of intentionality, suggesting that this is a learned discrimination, e.g., one of the items on the Stanford-Binet describes the child being accidentally struck by another child. To obtain a correct score on that item, the child must be able to understand the meaning of "accidental" and, in addition, must convey

some reaction other than an aggressive one. In a developmental investigation of boys' responses to hypothetical provocations, little difference was found for 7-year-olds in aggressive reactions to intentional as compared to accidental provocations, while 9- to 12-year-old boys responded with much more aggression to an intentional than to an accidental provocation (Shantz & Voydonoff, 1973). These developmental shifts in the response to the cognitive attribute of intentionality are undoubtedly related to the extensive literature on moral development. These studies indicate that preschool-aged children evaluate a transgression in terms of outcome rather than intention, while only in later developmental stages does the child evaluate, for example, the deliberate breakage of one cup as "naughtier" than the accidental destruction of a dozen cups (Piaget, 1932).

Intentionality, then, is conceived of as a discriminative stimulus such that the labeling of a frustrating or painful event as unintentional tends to elicit a nonaggressive reaction. It may be contended that the cognitive label of "unintentional" blocks anger and aggressive drive rather than reducing or completely circumventing these instigators as the model proposes. It is very difficult to demonstrate empirically the absence of inhibited aggression since it can always be contended that one's measures are not sensitive to the blocked or suppressed aggressive impulses. Nevertheless, research data and clinical observations strongly suggest that cognitive indicators such as the perception "unintentional" can effectively regulate aggression instigation without residual, blocked aggressive impulses. Rather convincing data bearing on this issue are provided by a study of Nickel (1974) in which he experimentally manipulated the intentionality of shock infliction. First, he found that aggression was much more closely linked to the intentionality of an aggressor in inflicting shocks than to the absolute amount of shock inflicted. Second, individuals subjected to intentional shock manifested displaced as well as direct aggression as compared to a nonshock group. However, when the same amount of shock was perceived as unintentional, both displaced and direct aggression were at nonshock, control group levels.

We have explored the dimension of intentionality at some length since there is a body of literature bearing on the effects of that cognitive variable and since it can serve as a prototype for the role of other cognitive factors. A similar function is postulated for the second cognitive mediator described in Fig. 2 under physical injury. Statements such as "I deserved the punishment," "I provoked him into hitting me," and "She has a right to retaliate" pertain to the dimension of justification. Everyday experience indicates that frustrations that are perceived as justified

are much less likely to elicit aggression than frustrations perceived as unjustified. A student who is frustrated by a poor grade is unlikely to feel angry at the instructor if he/she believes the examination and grading system were fair, while a belief that the grading was arbitrary is likely to elicit a great deal of anger. Similar considerations hold in determining the reaction to a failure to receive an award, a salary increment, a research grant, admission to a desired graduate school, and so on. Political history tells us there are few sources of anger as powerful as the perception of injustice. The cognition that a pain infliction or a frustration or deprivation was "just" can then function as a significant regulator of aggressive reactions through reducing anger and retaliatory aggressive motivation. As an incidental note, we know very little as to the antecedents of this differential reaction to the perception of justice versus injustice and the bases for the often intense affective reaction to injustice.

The examples of cognitive mediators provided for the second category of antecedents (B), insults, suggest varied mediating paths, depending on the cognition. A statement in response to insult such as "he's emotionally disturbed" bears on the dimension of responsibility. The insult thereby reflects a "problem" in the insulter rather than any shortcomings in the object of the insult, thus altering the meaning of the verbal attack and blunting its impact, the level of anger being particularly affected. The statement "who cares" has a similar blunting effect through minimizing the relevance, status, or power of the insulter or the significance of the insult. The mediator "I'll show them who's the best student" functions in a rather different manner. Anger remains unaffected. However, the drive to inflict injury is replaced by an alternative motivation—namely, demonstrating that the insult is invalid by means of a significant accomplishment; that is, instead of being aggressively motivated, the anger is channeled, as it were, into achievement motivation. Empirically, little attention has been given to this hypothesized process. The circumstances under which individuals are more likely to respond with heightened achievement or other self-enhancing motivation rather than hostility to anger-eliciting devaluation, and individual differences in this regard, have not been investigated.

The final category of antecedents (C) consists of a diverse cluster, each of which may foster anger or lower the aggressive response threshold. The examples of possible cognitive mediators that are noted in the figure are hypothesized to affect either the aggressive response threshold or both anger and that threshold. The first set of mediators—images of relaxing, of eating desired foods—are visual rather than verbal intervening events. Visualization has become an increasingly common method

of evoking some desired response. In this case, the objective is to elicit positive motoric and affective responses that are incompatible with anger and with aggressive actions. Relaxation, for example, entails motoric action that is incompatible with the muscle tensions that are concomitants of anger. Relaxation procedures have been systematically applied to the reduction of anger by Novaco (1975). The "eating of desired foods" is cited only to convey the notion that there is a range of visualization that can evoke positive feelings and motoric tendencies that are incompatible with feeling angry and acting aggressively. Undoubtedly, one reason why eating and drinking are common features of conferences aimed at resolving differences between conflicting parties is their value in mitigating anger that might otherwise disrupt the negotiation efforts.

The self-verbalization of "counting to ten" is a long-established maxim for the control of aggressive acting out behavior. The maxim recognizes the importance of delay and how even a simple cognitive response such as counting to ten can help delay an impulsive aggressive action, usually instigated by anger. The function of the delay is to provide an opportunity for the organism to engage in cognitions such as those already cited. Inhibitory cognitions, enumerated in Fig. 2 under the category "Anticipation of Punishment," are especially germane to the control of aggressive reactions. Inhibitions can, of course, function automatically, more or less through past conditioning. However, new situations require the rehearsal of possible consequences of an aggressive act in order for the individual to make an adaptive response to the situation. In addition, even in old situations, anger may disrupt attention to inhibitory cues (e.g., the policeman's uniform) and, consequently, rehearsal of inhibitory verbalizations and engaging in other cognitive acts (e.g., "I did go through the red light") are useful in these situations.

The final category, "Use of Imagination, Fantasy Activities," brings us to the mediating process with which this chapter is principally concerned. Our interest here is in the effects of the fantasy activity as such on aggressive behavior rather than on the specific content of the fantasy. Reference has already been made to fantasy in connection with the visualization of positive affective experiences. The focus there was on the content of the fantasy rather than on the act of visualization. We do not minimize the importance of content and its potential influence upon aggressive behavior. However, there are theoretical reasons to believe that fantasy activity, independent of content, can exercise a control function over aggressive behavior. The research study to be described here is addressed to this hypothesized effect of fantasy upon aggression.

II. A STUDY OF THE EFFECTS OF FANTASY TRAINING ON AGGRESSION

The term "fantasy" embraces a diversity of behaviors. Story telling or reading, art, drama, doll play, dreaming, daydreaming, and reverie are all examples of fantasy activities. They have in common a dimension of unreality. They are activities which are not in an obvious sense perceived by the subject as goal directed. The term fantasy is also used in a broader sense to denote any internal elaboration or representation of stimuli. From a psychoanalytic perspective, particularly as elaborated by Rapaport (1959), fantasy includes the full range of internal cognitive events, from visual hallucinatory representation of objects to the more sophisticated thought processes entailed in decision making and planning. As previously indicated, the training project focused on the training of fantasy in the imaginative sense of that term rather than in its direct instrumental problem-solving sense. However, it must be noted that these two aspects of internal ideational processes are interconnected and that one may merge into the other and generalize to the other.

One of the manifestations of the contemporary rediscovery of "cognition" and of the advances that have been made in the analysis of covert cognitive processes is the increased empirical interest in fantasy activities (Klinger, 1971). This interest is reflected in research on dreams (Dement, 1965), daydreams (Singer, 1966), imagery (Paivio, 1971), and the imaginative aspects of the child's "mind" (Singer, 1973). Also, fantasy techniques are now being used psychotherapeutically in such procedures as desensitization (Lazarus, 1971) and implosive therapy (Stampfl & Levis, 1967). For many years, the principal interest in fantasy behaviors had been in their diagnostic value. Dreams, daydreams, and thematic apperception test (TAT) stories were content material from which inferences could be drawn regarding personality dispositions and descriptive aspects of an individual.

More recently, empirical and theoretical interest has shifted in the direction of understanding the functional or adaptive value of fantasy activities. Why do individuals dream, daydream, engage in imaginative play, write dramas, or go to the theater. What adaptive value do these activities have? There are data now available to suggest that, under some conditions, certain imaginative fantasy activities can serve to delay and regulate action, assist the organism in managing heightened stimulation, and, in terms of the specific interest of the present project, help control aggressive behavior. One of the earliest studies concerned with the functional value of fantasy (Feshbach, 1955) provided evidence that

angered individuals felt less angry following the opportunity to express their anger in TAT-type stories. There are also a substantial number of studies carried out within the sensoritonic tradition (Singer, Meltzoff, & Goldman, 1962; Werner & Wapner, 1952) which indicate that cognitive activity tends to delay the impulse to action. Pointing to the satisfactions afforded by internal thought activity, Singer (1966), on the basis of his study of daydreaming, concludes, "the adolescent who cannot provide himself pleasure through fantasy, contemplation or manipulation of daydream images is compelled more directly to an overt motor imitation of the adult pattern." Singer (1974) subsequently provided an extensive review of the literature bearing on the properties of imagery and related ideation, particularly in regard to the use of imagery procedures in psychotherapy and behavior modification. Although these varied applications lend themselves to a number of interpretations, the importance of imagery and related fantasy behavior in the control and modification of action is consistently evident.

The effects of externally provided fantasy stimuli on aggression—e.g., television, movies, theater—as contrasted to internally generated fantasy—play, dreams, story construction—are a source of considerable controversy. Since this controversial issue is not germane to this article, we shall not review the extensive literature that relates to this matter. However, there are two findings in studies in this area that should be cited since they provided one important stimulus for a fantasy training project to be reviewed here. Of particular interest in the Feshbach and Singer (1971) field study on television and aggression are the findings indicating that the ability or tendency to express aggression in TAT-type story fantasy may help regulate aggressive behavior; e.g., individuals initially low in TAT-type aggressive fantasy manifested a significant decrement in aggressive behaviors in response to an aggressive TV "diet" as compared to a control diet, while individuals initially high in TAT-type aggressive fantasy displayed a much weaker experimental effect. Also, the only aggression measure on which the aggressive TV group declined relative to the controls was TAT-type aggressive fantasy. [The literature bearing on the complex relationship between TAT aggressive fantasy and overt aggressive behaviors (Feshbach, 1970) is not very helpful in clarifying the functional value of aggressive fantasy inasmuch as there typically is no information available on differences in initial strength of aggressive tendencies.]

.Also of interest are the data indicating that when a violent event presented on television is perceived as a fantasy, significantly less aggression ensues as compared to when that same aggressive stimulus content is perceived as a newscast reporting real events (Berkowitz &

Alioto, 1973; Feshbach, 1972). Fostering a fantasy set is different than the development of fantasy skills. Nevertheless, these data also suggest that fantasy training may be a fruitful approach to the regulation of aggression. Most relevant are those studies directly invoking fantasy training. Singer (1973) reports on a number of studies concerned with the correlates of preschool children's imaginative play. Not only does he find consistent evidence of a relationship between degree of imaginative play and socially appropriate behavior, but a training program designed to foster creative play produced a significant decrement in aggression. Saltz and Johnson (1973), also working with preschool youngsters, conclude that "fantasy, play training is a promising and practical intervention method enjoyed greatly by both the children and the adult interventionists."

In summary, the data on the functions of fantasy, its relationship to aggression, and its modifiability through training suggest the potential utility of the implementation of fantasy training programs for the modification of aggressive behavior. However, it is also evident that engaging in fantasy activities taps a number of psychological processes. One can distinguish at least three major cognitive mechanisms by which fantasy training may result in a decrement in aggressive behavior: (1) the enhancement of cognitive delay functions, (2) the cognitive expression of angry feelings, and (3) cognitive restructuring. The fantasy training that was carried out was designed to foster cognitive delay functions. A conscious effort was made not to use exercises that employed aggressive fantasy. However, one could not prevent the participants from engaging in aggressive fantasy or from using enhanced fantasy skills to restructure situations that had stimulated aggressive behaviors. Consequently, we shall elaborate on some of the implications for the regulation of aggression of each of these three processes.

A. The Enhancement of Cognitive Delay Functions

Both psychoanalytic theory (Rapaport, 1959) and the Werner-Wapner (1952) sensoritonic theory have postulated an inverse relationship between thought and action such that a restraint on motor action increases cognitive activity and, conversely, cognitive activity reduces the impulse to action. This process is especially important in the case of aggressive behavior because of its typically strong impulsive component. Here one needs to distinguish between aggressive behavior which is largely instrumental, as in the case of the child who deliberately pushes and shoves to be first in line, and aggressive behavior which is also a response to strong emotions. The sensoritonic function of fantasy is not

likely to have any effect on instrumental aggression which involves deliberation and articulation of a goal, but should help reduce the amplitude of affect-mediated aggression. The child who is frustrated and angry has a propensity or impulse to lash out at the source of the frustration and anger. A reflective cognitive response helps the child delay acting on impulse. The cognitive response may be relatively simple or may take the form of an elaborate fantasy. The cognitive activity may directly reduce the strength of the instigation, as sensoritonic theory would suggest, and/or it may act as a stimulus for other cognitions which may lead to a reconsideration of the situation and review of alternative modes of behavior.

B. The Cognitive Expression of Angry Feelings

Closely related to the impulse control function of fantasy is its potential expressive function. Whereas both nonaggressive and aggressive fantasies might contribute to impulse control, the expression of the affect of anger is probably best served by aggressive fantasy. The expressive function of aggressive fantasy should be distinguished from its value as a substitute goal. Fantasizing injury to some provocateur may not be a substitute for the actual infliction of injury; yet, it still may provide an opportunity for the expression of aggressive affect, in much the same sense as facial movements and overt vocalizations are used to express feelings. An important implication of this proposition is that a close connection or similarity between an aggressive fantasy and an anger-provoking stimulus is not necessary for the fantasy to produce a decrement in aggression toward that stimulus. The only requirement would be that the aggressive fantasy activity provide an opportunity for the expression of aggressive affect. Thus, to serve an expressive, cathartic function, it is necessary for the fantasy to be aggressive in content, with the important proviso that the fantasy materials focus on the expression of angry feelings rather than on injury to others (of course, the latter cannot be completely separated from the former; the issue is one of emphasis). This consequence of aggressive fantasies is the most controversial and ambiguous outcome since a number of theoretical positions would emphasize the possible aggression-stimulating, disinhibiting, and vicarious reinforcement effects of aggressive fantasy.

C. Cognitive Restructuring Entailing Insight and the Consideration of Alternative Response Strategies

In this respect, fantasy may appear to be indistinguishable from enlist-

ing more directed, problem-solving kinds of cognitive activities to bring about behavior change; that is, fantasy activity in the imaginative, story telling, daydreaming, dramatic sense may have cognitive reorganizational properties. There is some suggestion that dreams have this property (Breger, 1967), and the occurrence of a "sudden" insight in the course of an imaginative, fantasy sequence is not an uncommon experience. When fantasy content is concerned with aggressive problem situations, an opportunity is provided for a cognitive change in the structures of aggression-related events and behaviors. Through fantasy rehearsal, new perspectives and understanding may be developed regarding the nature of the provocation so that it is no longer perceived as a provocation, a threat, or a deliberate frustration. Fantasy rehearsal may also allow for the consideration and reinforcement of nonaggressive response alternatives to provocation.

Note should also be made of an incidental but perhaps quite important aspect of fantasy behavior which may result in lowered aggression; namely, the fantasy activity itself may provide satisfaction and positive experiences. To the extent that involvement in fantasy activity is a source of satisfaction and enjoyment, it will result in positive affective reactions that are incompatible with feelings of frustration and anger. As we have indicated, the theoretical emphasis that guided the fantasy training study was on the delay and control function of fantasy. However, while we could attempt to minimize the effects due to content of fantasy, particularly aggressive content, we could not eliminate any positive effects that may be associated with fantasy activity. Our experimental design for the fantasy training study does include a control activity group that engaged in nonfantasy training exercises that the children enjoyed, and thus does serve as a partial control for the effects of positive feelings that may be concomitants of the fantasy exercises.

The subjects in the study were 73 third- and fourth-grade boys and girls at an elementary school in Los Angeles, California. Approximately 30% of the children in the sample were bused to this middle-class elementary school from minority schools elsewhere in the Los Angeles area. After obtaining parental permission for subject participation, two criterion measures were used to select children for the study. These were a teacher rating of social behavior in the classroom (Social Interaction Inventory) and a modified peer evaluation of interpersonal behavior (nomination for roles in class play). Children were selected who were high, moderate, and low on each measure, matched for sex and, where possible, race and ethnicity, and then randomly assigned to experimental and control conditions. This procedure ensured that the most aggressive children in the school would be included in the study. We also

included less aggressive children because we believed that they might also benefit from the training procedures. In addition, we wished to avoid any labeling or stigma effects that might result if only highly aggressive children were selected for the study. The children selected ranged in age from 7.8 to 11.0 years old with a mean age of 9.26 years. Thirty-one of the subjects were girls and 42 subjects were boys. The ethnic distribution was approximately representative of the school population and consisted of 63% Anglo subjects, 20% Black, 5% Chicano, and 12% Asian subjects.

1. Pretraining Phase

The sample of children selected was administered a battery of tests that tapped cognitive and interpersonal functioning, imaginative ability, and characteristics of children's fantasy behavior. The tests were individually administered during two 45-minute sessions. The tests administered during the first session were: the Sears Self-Concept Measure, a modified version of the Betts Questionnaire on Mental Imagery, the Gordon Test of Visual Imagery Control, the WISC-R Vocabulary Subtest, and 20 selected cards from the Holtzman Inkblot Test. The Betts assessed imagery over a variety of sensory domains, while the Gordon focused on visual imagery. Both measures were combined to yield a single imagery score. The Holtzman Inkblot Test is related to the Rorschach test. It avoids difficult psychometric issues associated with the Rorschach by controlling the number of responses to each stimulus card. The Holtzman provides many more inkblot stimuli (the Rorschach has only 10 cards), and only one response to each card is permitted. The primary index of fantasy yielded by this test is the number of movement percepts, particularly human movements. The rationale for this measure is the presumption that movement is not inherent in the stimulus but is a property that the respondent provides the stimulus. The importance of human movement lies in the assumption, with some empirical support, that human movement percepts reflect greater maturity than animal movement percepts.

During the second testing session the following tests were administered: a structural interview designed to assess play and recreational preferences, frequency and content of fantasy activity, and the affective tone of fantasy and dreams; a self-report questionnaire of aggressive and prosocial behavior; four Thematic Apperception Test (TAT) cards (4, 7BM, 12M, 18BM); and the Wide Range Achievement Test. The TAT cards yielded three fantasy measures pertinent to the regulation of aggression. One measure is a score based on the amount and degree of aggression in the stories. A related measure assesses the amount of

anxiety and conflict in relation to aggressive thematic content. The third measure is a "transcendence" index that has been used in TAT research to assess the extent to which the respondent's story to the TAT stimulus extends beyond the descriptive characteristics of the TAT picture on the TAT card.

Following the pretest sessions, the children were randomly assigned to treatment groups. There were eight participating groups with six subjects in each. All groups consisted of the same six subjects: two who ranked high on both criterion measures of aggression, two who ranked medium, and two who ranked low. Apart from the restrictions regarding sex and level of aggression, all members were assigned randomly to groups. Of the eight participating groups, five (18 boys and 12 girls) received training in fantasy and imagination skills, and three (12 boys and 6 girls) received control exercises involving science projects. The remaining 25 children in the study (12 boys and 13 girls) were used as nonparticipating control subjects.

2. Training Phase

The children who had been assigned to groups met for two weekly sessions of 45 minutes each. The training phase extended over a 10-week period with a 1-week interruption due to Easter vacation. Each experimental and participating control group was led by a trained group leader who had previous experience instructing small groups of children. There were three instructors, all women, and each led both the experimental and control training groups. Each participating group met with the same instructor for the duration of the training phase. The sessions were conducted in a project trailer that was placed on school grounds and used for the duration of the study.

Subjects in the experimental groups participated in exercises designed to teach cognitive skills related to fantasy. The exercises were extended to provide a variety of structured experiences that encouraged the children to engage in and control fantasy activity. The exercises can be grouped into five general categories: guided fantasy, story construction, pantomime and dramatics, art projects, and fantasy games. The exercises were drawn from a variety of sources, including creative writing manuals, imagination and fantasy games, and uses of imagery in psychotherapy. Some were original exercises constructed by project members. All exercises were designed to be enjoyable and to include both quiet action and activities allowing motoric involvement.

The exercises for the participating control groups primarily consisted of nonsocial problem-solving tasks and a variety of science projects. The nonparticipating control subjects were pre- and posttested but did not

take part in any other activities. Teacher ratings of subjects' classroom behavior were obtained for 2 days each week during the course of the training phase. In addition, behavioral observations were made of the participating groups during each training session.

3. Posttraining Phase

After completion of the training phase, the criterion measures (Social Interaction Inventory and Class Play) were readministered. In addition, all children in the sample were posttested on a variety of measures designed to tap cognitive, interpersonal, and fantasy ability. The tests were administered during four 45-minute testing sessions. The measures used in the first two sessions were individually administered, while the tests in the remaining two sessions were administered to groups of four subjects. A number of pretest measures were repeated: the Wide Range Achievement Test, a shortened form of the fantasy interview, the Betts questionnaire on Mental Imagery, the Gordon Test of Visual Imagery Control, 20 cards from the Holtzman Inkblot Test, the self-report of aggressive and prosocial behavior, the Sears Self-Concept Measure, and four selected TAT cards (2, 6, 18BF, 18BM). In addition, several posttest measures were employed that had not been previously administered: the Draw-a-Line-Slowly measure of motor control, the Embedded Figures measure of field dependence-independence, and the Crowne-Marlow measure of social desirability. The final posttest task consisted of placing same-sex groups of four to six children in a play situation with a variety of toys likely to elicit aggressive behavior. The children's play was unobtrusively videotaped and later scored on dimensions of physical and verbal behavior. Upon completion of the post-testing phase, the participating teachers were paid a sum of \$150 for their cooperation and all the children in the sample were given a party and small gifts.

4. Results

A review of the correlates of the measures of aggression reflects a rather disappointing set of intercorrelations. While the teacher and class peer ratings of aggression are correlated, the anticipated relationships with the fantasy and other cognitive measures are modest and also vary with the sex of the child. For example, the pretraining measure of imagery (Betts-Gordon) is negatively correlated with aggression in girls, but is positively correlated with aggression in boys. The relationships change, reflecting either unreliability or alteration of the correlational matrix as a function of the experimental treatment. At the same time, a few fantasy measures yield consistent relationships. A multiple regres-

Table I. Pretraining and Posttraining Cognitive Predictors of Teachers' Ratings of Aggression of Boys and Girls

Predictors	Boys		Girls	
	Pre	Post	Pre	Post
Self-concept	-.11	-.09	-.09	.10
Wide-range achievement	.03	.23	.11	.30
TAT aggression	.22	.51	-.05	.05
TAT transcendence	-.46	-.28	-.03	.41
(inkblot test)				
Holtzman rejection	-.11	.31	-.01	-.43
(inkblot test)				
Holtzman hostility	.27	-.12	.54	-.06
aggression				
TAT anxiety	-.30	.04	.33	-.05
Betts-Gordon imagery	.36	-.19	-.24	.04
Holtzman human move-	-.04	.11	-.46	-.29
ment				
Reaction time	.08	-.58	.21	.08
	$M_R = .52$	$M_R = .55$	$M_R = .57$	$M_R = .57$

sion analysis of the pre- and postpredictors of aggression (using the teacher's ratings as the criterion and the fantasy-cognitive measures as the predictors) reflects both the consistencies and the inconsistencies (Table I).

For males, two consistent correlates appear—the amount of aggression expressed in the story responses to the TAT stimuli, and the degree to which the TAT stories transcend the concrete, descriptive properties of the stimuli. This pattern is of particular interest since it indicates that hostility elaboration, which can contribute to the transcendence score, has functionally different consequences for boys than the cognitive elaboration conveyed by the transcendence scores. Boys' TAT aggression appears representative of rather than compensatory for the manifest expression of aggression. The processes that mediate "transcendence" of the TAT stimuli should, according to theoretical expectation, contribute to the delay and control of aggressive responding. Why does this relationship not hold for girls, the posttest reflecting an opposite trend for the transcendence measure? Possibly, the dynamics differ for girls' aggression—the transcendence index being associated with stronger aggressive tendencies; thus, for girls TAT aggression tends to be positively correlated with TAT transcendence. Similarly, aggression anxiety is inversely correlated with manifest aggression in boys but is positively related to aggression in girls.

Table II. Effects of Fantasy Training Program on Aggression as a Function of Sex and Initial Level of Aggression^a

	Boys			Girls		
	Experi- mental	Partici- pating control	Nonpartici- pating control	Experi- mental	Partici- pating control	Nonpartici- pating control
High aggression	-.63	-.31	-.17	.51	-.27	.83
Low aggression	.17	.34	1.01	.59	-.33	.10

^a Dependent variable is based on post- minus pretraining changes in sum of peer ratings and teacher ratings of aggression.

Also of note is the sex difference in the correlation of the pretraining Betts-Gordon imagery measure with aggression. Completely contrary to anticipation, imagery scores are positively correlated with aggression in boys. This finding is especially important since a good deal of the fantasy training involved imagery exercises. Another sex difference of note, not included in Table I, is the inverse relationship found for boys between Factor 1 of the fantasy interview and teachers' ratings of aggression. The first factor of the fantasy interview is defined by a high frequency of fantasy behaviors such as daydreaming and engaging in make-believe games and positive affects associated with these fantasy activities. Thus, boys who engage in little fantasy tend to be more aggressive, while this pattern was not discerned in the female sample.

We turn now to an examination of the effects of the fantasy training program. As can be anticipated from the correlational analysis, the fantasy training program proved to be only marginally effective in reducing aggressive behavior. Post- minus pretraining aggression change scores, based on the sum of peer and teacher ratings, are presented in Table II. It can be seen from the mean changes that the experimental intervention had no effect on girls. While, for the boys, the experimental groups displayed the largest decrement (or smallest increment), the mean differences are small. The mean difference between the experimental and the participating control group falls far short of significance, while the difference between the experimental and nonparticipating controls is significant at only the .06 level (one-tailed test). There is evidence that the fantasy training did produce significant increments on a number of the fantasy measures, especially for boys. However, the problem, we believe, lies in the complexity of fantasy processes and the need to make

finer theoretical distinctions among these diverse processes, particularly in regard to their relationship to the management of aggression.

One important distinction is that between the content of fantasy and the process of engaging in fantasy. And with regard to the latter, the effects of visualization of stimuli probably differ from those of cognitive elaboration or ideational association to and transformation of stimuli. Here too, further functionally relevant distinctions may be called for—for example, between daydreaming and imaginary “make-believe” activity.

The content–process distinction is a difficult one to implement empirically since one cannot engage in the process of fantasy without some content. The intent of the fantasy training program that was implemented was to stimulate fantasy activity that was not specifically instrumental to the control of aggression. Thus we attempted to avoid fantasy content that might entail rehearsal of aggression-stimulating events and punitive consequences for aggressive solutions or nonaggressive means of responding to these events. We also attempted to minimize fantasy activity that might involve the rehearsal and reinforcement of prosocial behaviors. The theoretical and empirical purpose was to determine whether encouragement of fantasy activity per se, independent of the rehearsal of aggression control verbalization, would result in a significant reduction in aggressive acting out and behavior.

The analog for this effort was a prior experimental field study (Feshbach, Feshbach, Fauvre, & Campbell, 1983) in which comparable groups of children were given empathy training without directly addressing aggressive or prosocial behavior. The empathy training entailed exercises that were designed to enhance skills in three areas that have been hypothesized to be critical components of empathy (Feshbach, 1975, 1978): (1) the discrimination and labeling of affect in others and oneself, (2) the ability to assume the perspective of another, and (3) the ability to experience and express affect. These skills could be trained without raising issues of alternatives to aggression. The finding that the empathy training resulted in significant positive changes in social behavior lent support to the proposition that empathy skills have an important mediating role in the regulation of aggression. It was our intent in the fantasy training project to determine whether fantasy skills had a comparable mediating role such that fantasy training would result in lowered aggression.

However, fantasy exercises, by their very nature, make it difficult to eliminate aggressive and other potentially stimulating content, particularly since much of the fantasy in which the children engaged was private. In addition, visualization exercises proved to be rather stimulating and perhaps too much “fun” for the participants. They required rela-

tively little in the way of cognitive demands, certainly much less than did the empathy exercises. Whereas some children had occasionally complained about the difficulty of several of the empathy training exercises, this was never the case for the imagery exercises. The training in story elaboration, in facilitating alternative cognitive ideation, was more demanding. However, one cannot separate the experimental effects of the different kinds of fantasy exercises that were implemented and cannot, with any confidence, attribute the failure to find a substantial impact of fantasy training to the visualization component.

Whether visualization or story construction or dramatics is involved, the effort to separate training in fantasy processes from rehearsal of particular kinds of fantasy content is probably too severe a requirement. From an applied perspective, one's objective would be to determine the most effective combination of exercises. From a theoretical perspective, the separation would be of interest, but another strategy might be appropriate—for example, varying the content of the fantasy exercises and determining the effectiveness of fantasy training across a wide range of content. In addition, the category of "fantasy" is too broad. Finer theoretical distinctions between the different kinds of fantasy are called for. There is certainly evidence that cognitive skill training is a useful approach to the management of aggression.

The studies of empathy training (Feshbach *et al.*, 1983) and of fostering cognitive alternatives (Spivak & Shure, 1974) suggest that cognitive training that has a clear and explicit theoretical base can have a significant effect on the range of children's social behavior. To the extent that cognitive training is effective, the generality of its effects would be its advantage over the reinforcement or modeling of specific nonaggressive behaviors. Fantasy processes presumably mediate a wide range of social behaviors. The challenge is to develop a fantasy training approach that may incorporate specific content representations of the management of aggression but yet will enhance fantasy skills that can mediate varied social behaviors.

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The Regulation of Aggressive Behavior

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Aggression has traditionally been conceptualized as being an emotional, impulsive act, triggered by a delimited number of cues (e.g., frustration) and mediated by inherent physiological or motivational processes (e.g., arousal). The implications of this model for the control of aggression are obvious: either alter the aggressor's environment or regulate the aggressor's level of arousal. Given the model's narrow emphasis on specific aversive antecedents and internal, physiologically based determinants of aggression, the role of social and cognitive factors in the regulation of aggression have been either deemphasized or neglected.

Advocates of the more traditional approaches, due to their inherent biases, have failed to provide us with crucial information concerning a number of important issues. For example, how does an aggressor's cognitive evaluation of a provocative situation influence the outcome of an aggressive altercation? Are there factors in the social environment which could modulate the intensity of aggressive behavior? Is it possible to identify the personality characteristics which predispose individuals to initiate or maintain attacks? How does verbal communication influence aggressive encounters?

It is the author's contention that a wide variety of physiological, emotional, social, situational, and cognitive antecedents regulate the expression of aggressive behavior. Any one factor or a combination of these factors could instigate or inhibit aggressive responding. There is little doubt that such physiological and emotional antecedents as pain, feelings of anger, hormone balance, and anxiety can influence harming behavior. However, human aggression also appears to be regulated by

such social and cognitive factors as pressure from peers, cultural norms, self-awareness, presence of bystanders, and personal attributions. Unfortunately, traditional models of aggression have focused, almost exclusively, on the effects of emotional and physiological antecedents.

The purpose of this paper is two-fold. First, the highlights of the traditional models of aggression will be reviewed, concentrating on the problem of the regulation and control of aggressive behavior. Second, an attempt will be made to examine some of the research that we have been conducting over the last 20 years relating to the issue of aggression control. An emphasis will be placed on research that focuses on such traditional variables as pain, frustration, and arousal, as well as on such nontraditional variables as social pressure and verbal communication. It is hoped that the material reviewed in the article will help to convince contemporary investigators to redirect some of their attention to studying the effects of social and cognitive factors on the regulation of aggressive behavior.

I. THEORETICAL PERSPECTIVES

A. Frustration-Aggression Theory

The frustration-aggression theory, advanced by Dollard, Doob, Miller, Mowrer, and Sears in 1939, had a profound influence on the scientific investigation of aggression. The theory posited "a universal causal relation between frustration and aggression." More specifically, the theory, a behavioral adaptation of early psychoanalytic theory, proposed that frustration produced an instigation, inclination, or drive to aggression. The authors, recognizing that aggression did not always result from frustration, proposed that aggression would be inhibited if punishment was anticipated as a consequence of the aggressive act. However, the inhibition of the aggressive act, according to the authors, would increase the instigation to aggress, due to the added frustration produced by the thwarted goal response. Thus, the inhibition of aggressive behaviors intensifies aggressive drive.

The authors utilized the concept of catharsis to account for the reduction of aggression. They assumed that the greatest reduction would occur when hostility was directed at the original source of frustration. However, some catharsis was assumed to occur through fantasy, displacement, and attacks on inanimate objects.

What are the implications of the frustration-aggression theory for the control of aggression? The theory suggests three means of reducing

aggressive behavior: punishment (which will inevitably increase frustration), the release of aggressive drive (which results in legitimizing aggressive acts), and the reduction or elimination of frustration (which is unrealistic). All three of these approaches are based on one basic premise, that the aggressive drive regulates the expression of aggressive behavior. One must either allow the drive to be discharged, delay the discharge, or prevent the instigation of the drive.

The frustration-aggression theory has been extensively scrutinized and criticized. First, numerous investigators have demonstrated, as succinctly stated by Bandura (1983), that "frustration has varied effects on behavior; aggression does not require frustration." Second, the concept of catharsis has received little empirical support. Numerous studies have produced either equivocal results or a tendency for aggression to increase subsequent to the performance of an aggressive act. Following an extensive review of the literature, Quany (1976) concluded, "results from the studies reviewed cast serious doubt on the traditional aggression catharsis hypothesis" Third, contemporary investigators have become highly skeptical of the assumption that punishment is an effective strategy to reduce aggression. As stated by Baron (1983), "Investigations conducted during the past decade suggest that neither punishment nor catharsis is quite as effective in deterring overt aggression as once believed."

B. Cue-Elicited Aggression Theory

There have been several modifications of the frustration-aggression model. One of the most influential was proposed by Berkowitz (1965, 1969, 1973). Berkowitz argued that frustration was not sufficient to elicit aggressive behavior. Frustration, he stated, simply produced a state of arousal. The frustration-induced arousal created a "readiness" to respond aggressively. According to Berkowitz, the presence of aggression-eliciting cues transformed the "arousal" into overt acts of aggression. Presumably, any stimulus could acquire the capacity to elicit aggressive responses from aroused persons if they had previously been associated with instigators of "anger" (such as the name of an instigator) or aggression generally (such as a weapon). As summarized by Zillman (1979), Berkowitz assumed that "human beings are partly driven (by a state of anger) and partly pulled (by the environment) into violent action." There has been considerable criticism of the empirical research purported to support Berkowitz's "aggressive cue theory." Much of the criticism has focused on the methods used to expose subjects to aggres-

sive cues (Page & Scheidt, 1971). Zillman (1979), following an extensive review of the literature, concluded, "the available research evidence concerning 'aggressive cues' such as weapons is largely negative, inconsistent, and contradictory."

The theoretical perspectives espoused by Dollard *et al.* and Berkowitz, which generally represent the mainstream of thought among contemporary social psychologists, stress emotional and motivational processes and the prepotency of anger-arousing cues. They either ignore or attach little importance to the roles of cognitive, social, and personality processes. However, a few contemporary investigators have questioned this approach and have suggested that investigators direct more of their attention to studying the social and cognitive controls of aggression. Ferguson and Rule (1983), for example, recognized ". . . the underdeveloped nature of research and theory on the cognitive determinants of anger and aggression," and attempted to examine the role of attributions in producing ". . . blame ascriptions, anger and hostile retaliation."

Berkowitz, one of the major proponents of the neobehavioral approach to aggression, has responded to the criticisms of cognitively oriented investigators by both criticizing their perspective and reiterating his position. In one article he attempted to critically "review the positions taken by cognitively-oriented social psychologists" (Berkowitz, 1982). In a section labeled, "Cognitions as All-Important," Berkowitz represented the cognitive position in a narrow, Schacterian manner. He argued, "According to the now-dominant contemporary social psychology, the individual has to think of himself as having particular emotional feeling if he is to show emotional behavior consistent with that feeling." In fact, very few cognitively oriented investigators would argue that aggressive behavior presupposes the intentional labeling of an emotional state as "anger." Instead of being concerned with an aggressor's emotional labeling, the typical cognitive theorist appears to be interested in an aggressor's interpretation of a target's behavior. According to Ferguson and Rule (1983), for example, aggression is more intense ". . . when the provocation is seen as intentional rather than unintentional, foreseeable rather than unforeseeable, or perpetrated for socially unacceptable rather than acceptable reasons." Thus, these cognitively oriented theorists are interested in ". . . the perceiver's attributions for the harm doer's behavior."

Recently, Berkowitz (1983) presented his theoretical position from a somewhat different perspective. Berkowitz still argued that ". . . aversive events are the root of angry aggression," and aggressive behavior is mediated by emotional instigations. However, his contemporary posi-

tion appears to be more tempered regarding the role of cognitive mechanisms in regulating aggression.

According to Berkowitz (1983), aversive events, such as frustration, pain, odor, and high temperatures, create internal reactions or instigations. These, in turn, produce “. . . a tendency to attack the perceived source of the unpleasantness.” Borrowing heavily from Leventhal’s (1980) perceptual–motor theory of emotion, Berkowitz theorizes that the aversive stimulus evokes “expressive reactions and schematic memories characteristic of anger.” He appears to be suggesting that an aversive event evokes spontaneous reactions within the body as well as ideas and images (memories) that have been previously associated with aggressive events. Whether or not the individual receiving the aversive event is consciously aware of the expressive reactions and schematic memories, the internal reactions produce the tendency to aggress. In relating a personal experience, Berkowitz noted, “This aversive stimulus therefore evoked the expressive reactions and schematic memories characteristic of anger even before I was consciously aware of these responses, and they in turn evoked an instigation within me to attack the perceived source.”

Berkowitz contends that the theoretical position described above is compatible with his “. . . neobehavioristic position stressing associationistic processes.” The basic formulation does, in fact, appear to depict anger-induced aggression as an unthinking, unconscious process. He argues that given an intensely aversive event, an impulsive act of aggression would be likely to occur. In fact, Berkowitz goes out of his way to stress that once strongly instigated by an aversive event, cognitive regulation is virtually impossible. Describing a person who has experienced a highly unpleasant event, Berkowitz states, “. . . in the heat of the passion, he probably is not engaging in the sort of analysis envisioned by the cognitive–attribution theories of emotion.”

C. Social Learning Theory

Social learning theory appears to have developed as a result of the declining theoretical and empirical status of instinct, biological, and drive-oriented theories of aggression. The principal advocate of the social learning perspective is Albert Bandura. Therefore, this discussion will concentrate on his social learning analysis of aggression. Bandura’s theory attempts to account for the acquisition of aggressive behaviors, the instigation of aggression, and the maintenance of aggressive responses. The first issue is dealt with in a relatively straightforward manner: aggression is acquired by direct experience and, more importantly,

a process of social modeling. Since this article is concerned with the regulation of aggressive behavior, Bandura's account of the processes involved in the initiation and maintenance of aggression will be described.

With respect to how aggressive behaviors are activated, Bandura distinguishes between two classes of "motivators": aversive and incentive. Bandura's conception of aversive instigation is congruent with traditional views of "angry" aggression. It assumes that aversive experiences (e.g., frustration, physical assault, verbal threats, and insults) produce a "general state of emotional arousal." This arousal state, presumably, can facilitate a wide variety of responses (e.g., seeking support, withdrawal). Whether the response will be aggressive or not depends mainly upon the person's learning history. Aversive conditions tend to elicit aggression from persons who have learned to respond aggressively to stress.

There is good reason to question the validity of Bandura's traditional argument that aggression is generated by a general state of arousal. As noted by Zillman (1983) in a recent review, "The relationship between arousal and aggression is apparently more complex than many investigators had imagined. Arousal is evidently not a universal energizer of aggression."

Bandura recognized that the traditional preoccupation with aversive instigators of aggression has resulted in the neglect of cognitive determinants. From Bandura's perspective, human aggression is often the result of "anticipatory positive consequences." He argued that due to his capacity to think about future consequences, the human being may aggress in order to gain material, social, or sensory outcomes. The incentive instigator, according to Bandura, ". . . is the pull of expected benefits rather than the push of painful treatment."

One of the major contributions of Bandura's social learning theory concerns the delineation of the mechanisms or factors which maintain the occurrence of aggressive behaviors. Consistent with other behavioral approaches, aggression is viewed as being reinforced by such external consequences as "tangible rewards," "social and status rewards," "reduction of aversive treatment," and "expressions of injuries." However, social learning theory does recognize the possibility that aggression may be controlled by vicarious reinforcement and self-regulatory mechanisms.

Bandura (1973, 1983) has suggested that aggression may be regulated by personal self-reinforcement systems and internalized norms. Presumably, these processes control aggression through self-administered approval. While Bandura's intentions are laudable, he presents little

compelling empirical evidence to support his position that aggression is controlled by self-regulatory mechanisms. In fact, Bandura's recent treatise on the "psychological mechanisms of aggression" provides virtually no empirical evidence concerning self-regulatory processes (Bandura, 1983).

Contemporary approaches to aggression control have been strongly influenced by the traditional behavioral emphases on the emotional bases of human aggression. Most of the aggression control techniques advocated by current investigators attempt to suppress, counteract, or vent anger or arousal. Punishment is supposed to counteract anger by increasing fear; pain cues are assumed to increase empathy, which, it is assumed, is incompatible with anger. The expression of mild forms of aggression (e.g., "creative fighting"), is believed to reduce intense, overt acts of aggression by venting anger. Baron (1983) has suggested that "feelings of amusement" may also be incompatible with anger. He notes, "If angry individuals can be induced to smile or laugh, their anger disappears."

II. LABORATORY STUDIES ON AGGRESSION CONTROL

A. Reaction Time Procedure

I still remember the excitement I felt when, as a graduate student, I first became aware of the research being conducted by Berkowitz, Buss, and Milgram. All three of these investigators had developed what appeared to me to be promising methods to study aggressive behavior. Prior to the 1960s, researchers tended to rely on self-report and projective tests to measure aggressive responding. In a typical study, subjects were frustrated or annoyed and presented with either a questionnaire to assess their attitudes toward the experimenter or a projective stimulus. Researchers were and continue to be critical of the use of such indirect measures of aggression. Carpenter and Armenti (1972) stated, for example, "aggression indirectly observed is supposed to imply that direct aggression would occur if circumstances allowed it . . . however, there is some doubt as to whether this is true."

Milgram, Buss, and Berkowitz advocated the use of more objective means of measuring aggressive responding. Basically, they defined aggression as the delivery of a noxious stimulus to a target and measured aggression by providing subjects with the opportunity to administer electric shocks or noise to a peer. As noted by Carpenter and Armenti

(1972), studies that utilize such measures "are easier to interpret than are those which use indirect observation because no inferences about the meaning of the observed behavior are necessary."

While I reacted favorably to the recommendation that more objective measures be used to study the dynamics of aggressive behavior, I believed that there were problems with the paradigms offered by Buss, Berkowitz, and Milgram. Milgram's paradigm appeared to be too stressful and was only appropriate for the study of obedience. Buss' procedure confounded altruistic and hostile motivation, while Berkowitz's methods did not allow for continuous interaction between two adversaries.

In an attempt to correct these problems I designed what has come to be labeled the competitive reaction time procedure. This procedure requires two persons to compete, over a series of trials, on a task involving simple reaction time. Prior to each trial, the competitors choose an intensity of shock that they wish their opponent to receive if their opponent has a slower reaction time on the ensuing trial. Typically, the subject can choose from among 10 different levels of shock. These range from a mild shock up to a level that the opponent had previously judged to be highly unpleasant. Following their shock selection, the competitors perform the simple reaction time task and await feedback. During feedback, a light flashes to indicate which intensity of shock the opponent chose for the subject. On some trials, the subject receives the shock, which indicates that he had a slower reaction time than his opponent on that trial.

Usually there is no opponent; the shock intensities and win/loss ratio are programmed by the experimenter. This procedure allows the experimenter to manipulate the level of attack, vary the vulnerability of the aggressor, and observe a continual interaction between the antagonists.

The competitive reaction time paradigm appears to provide a valid measure of aggressive behavior. A number of studies indicate that the measure of aggression that is derived from the paradigm differentiates between groups of subjects theoretically expected to differ in aggressive potential (Dengerink, 1971; Genthner & Taylor, 1973). The paradigm also appears to be sensitive to situational variables that one would expect to influence aggressive behavior (Borden & Taylor, 1973; O'Leary & Dengerink, 1973).

B. Frustration

Psychologists in the field of aggression have been obsessed with the concept of frustration. There seems to be a need to believe that frustra-

tion is a powerful antecedent of aggression. Since 1939, when the hypothesis was first formalized, there have been literally dozens of studies conducted to determine whether or not the obstruction of a goal response would elicit aggressive behavior. The results have always been equivocal. Buss (1961) reviewed the literature and concluded that frustration was a relatively weak antecedent of aggression. He considered "attack," that is, the delivery of a noxious stimulus, to be the most reliable determinant of harming behavior. In 1965, Kaufmann reviewed the empirical literature and concluded that the concept was so "protean as to be refractory to operational definition." The studies continued to be conducted and continued to produce equivocal results (Zillman, 1979).

A number of studies have been conducted in our laboratory on the relationship between frustration and aggression. In the first study (Epstein & Taylor, 1967), two variables were manipulated: the aggressive intent of the opponent and the degree to which the subject was "defeated" on the reaction time task. Aggressive intent was manipulated by programming the "opponent" to set either very high or very low shock intensities. Degree of defeat was manipulated by the number of losses the subject experienced per block of six trials. The subject was programmed to win on 1/6, 3/6, or 5/6 of the trials.

Defeat was clearly frustrating, as it prevented the subject from succeeding in a goal-directed attempt to avoid noxious stimulation and/or beat the opponent. However, the perception of the opponent's intent was found to be a far more potent instigator to aggression than frustration in the form of defeat. The defeat variable had absolutely no effect on those subjects who competed with nonaggressive peers. Subjects set low shocks for their nonaggressive opponents whether or not they were capable of competing successfully. When competing with highly aggressive opponents, the defeat variable did influence the subject's shock settings: subjects who won 50% of the trials set the highest shocks. We concluded that "the results failed to support the frustration-aggression hypothesis."

In another study, Merrick and Taylor (1970) attempted to replicate this effect. Subjects were placed into the three conditions of defeat employed by Taylor and Epstein. Instead of competing with either aggressive or nonaggressive opponents, the subjects encountered opponents who became increasingly aggressive. All conditions of defeat evidenced an increase in shock settings. However, the greatest increase in aggression occurred, once again, in the equal-defeat condition. Shortell, Epstein, and Taylor (1970), following another attempt to examine the effects of

defeat on aggression, concluded “. . . frustration was found to be a relatively inconsequential instigator to aggression”

In the three studies cited above, subjects were strongly motivated to beat their opponent on the reaction time task. Some subjects, no matter how hard they tried, could not compete successfully. Yet, these “defeated” subjects did not show heightened aggressiveness.

Pisano and Taylor (1971) attempted to approach this issue from another perspective. They placed subjects into the reaction time task after they were frustrated with an insoluble puzzle. There were two levels of task frustration: success and failure. Subjects in the failure condition were given 5 minutes to complete an insoluble puzzle which was said to be a test of intelligence. While performing the task, subjects appeared to be totally engrossed in it, made frequent erasures and corrections, became overtly agitated, and, in many cases, pleaded for more time to complete it. During the task, the opponent was programmed to increase his shock settings. Many investigators have argued that frustration only increases a subject's readiness to aggress. Presumably, the presence of an external instigator is required before an act of aggression will occur under conditions of frustration. In the Taylor and Pisano study, the subjects were both frustrated and provoked. One would, therefore, expect the frustrated subjects to behave in a highly aggressive manner. According to the results of the study, frustration has no appreciable effect on shock-setting behavior.

In 1977, Schmutte, Leonard, and Taylor made one last attempt to demonstrate a frustration effect. They reasoned that the hypothesized relationship between frustration and aggression might have been obscured in earlier studies by learned social inhibitions. Therefore, they examined the effects of task-induced frustration on the aggressive responding of intoxicated and nonintoxicated subjects. The subjects who ingested alcohol were more aggressive than the subjects who received a placebo. However, the frustration manipulation did not influence aggressive responding. The interaction of alcohol and frustration was also nonsignificant. Once again, it was concluded “. . . frustration is a weak determinant of physical aggression.”

While many contemporary theorists are suspicious of the role of frustration in generating aggression (e.g., Baron, 1977; Zillman, 1979) they still tend to assume that if frustration is intense, and unexpected, it may facilitate aggression. Furthermore, it is assumed that the regulation of frustration or the emotional reactions elicited by frustration will either prevent or attenuate aggressive behavior.

C. Pain-Elicited Aggression

Traditionally, aggression has been linked to two variables: frustration and pain. A number of studies have demonstrated that a relationship exists between pain and aggression in a variety of species (e.g., Ulrich, 1966; Azrin, Hutchinson, & Hake, 1966). Given the regularity with which such animals as birds, rats, and primates fight when receiving noxious stimulation, Ulrich and Azrin (1962) described the pain-aggression relationship as reflexive. The above authors readily generalized their findings from animals to humans.

Human aggression researchers readily accepted the pain-elicited aggression hypothesis. For example, in a very influential text, Buss (1961) argued that "attack" (i.e., the delivery of a noxious stimulus) was a more potent determinant of aggression than frustration. Berkowitz (1969) maintained that attack was simply one form of frustration and initiated a program of research on pain-elicited aggression. According to Berkowitz (1983), pain elicits an appetitive motive to inflict injury on his adversary. He states, ". . . the painful stimulation does more than create a desire to escape, avoid, or terminate the unpleasant event; it also evokes appetitive aggression, an instigation to attack some target." He adds, "the aversively stimulated individual does have the goal of inflicting injury . . ."; he "seeks to hurt someone."

The subjects in our studies typically receive increasing intensities of shock from their opponent. They tend to respond to the opponent's provocation by gradually increasing their shock settings. These findings would appear to support the pain-elicited aggression hypothesis. However, it should be recalled that the competitive task provides two forms of feedback to the subjects. On half of the trials, the subject "loses" the competition and receives an electric shock. Additionally, on every trial, during the feedback period, a numbered light flashes to indicate to the subject the shock intensity that was chosen by the opponent. The feedback light flashes whether or not the subject receives a shock (i.e., loses). Thus, the task provides the subject with information concerning the aggressive intent of the competitor (feedback lights) as well as specific pain cues (shock).

Greenwell and Dengerink (1973) examined the effects of discrepant feedback on the subject's shock-setting behavior. The feedback lights for half of the subjects indicated that the opponent chose increasing levels of shock across trials. The lights for the other half of the subjects indicated that the opponent continually chose moderate shock levels. Within each of these groups, half of the subjects received shock which

gradually increased from low to high and half always received a shock of moderate shock intensity.

The investigators reported a highly significant effect of the feedback lights. When the feedback lights indicated that the opponent was always setting moderate levels of shock, the subjects tended to set moderate levels of shock. On the other hand, when the feedback lights indicated that the opponent was setting increasing levels of shock, the subjects tended to set increasing shock intensities. The actual levels of shock set by the opponent had no appreciable influence on the subjects' shock-setting behavior. That is, neither the main effect of constant versus increasing actual shocks nor the interaction of the pattern of actual shock with the feedback lights variable were significant.

The results of the Greenwell and Dengerink study help us put into better perspective the results of the Epstein and Taylor study presented earlier. It will be recalled that Epstein and Taylor varied both the intensity of shock chosen by the opponent and the frequency of shock received by the subjects. They found that regardless of how frequently the subject received the shock (1/6, 3/6, 5/6) he set low-intensity shocks for the nonaggressive opponent and high-intensity shocks for the aggressive opponent.

It would appear, from these results and the results of the Greenwell and Dengerink study, that the perceived intent of the aggressor is a more potent determinant of attack behavior than the pain caused by the aggressor's attack. The subjects in these studies responded to the information they received about the opponent's intentions rather than to the pain cues.

Given the apparent potency of communicated hostile intent in regulating aggressive behavior and the relative impotence of pain as an independent determinant of aggression, it is somewhat disheartening that many contemporary investigators still maintain that pain is a primary antecedent of human aggression. For example, in a recent article, Berkowitz (1983) conjectured, "it might be that people have to be undergoing a painful experience at the time they are to be instigated to aggression."

D. Arousal

Frustration and pain have traditionally been assumed to be the major antecedents of aggression. The primary mediator or facilitator of aggression has been "arousal." It has been assumed that arousal and aggression are inexorably linked. Early investigators believed that such antecedents of aggression as frustration were directly linked to aggressive drives (Dollard *et al.*, 1939). The concept of an aggressive drive gradually

fell into disfavor and was replaced with the idea of a general state of arousal. Many theorists felt that the existence of an aggressive drive could not be substantiated, and they disliked the pessimistic view that the only way to regulate the aggressive drive was through cathartic activity. It was assumed that the existence of arousal could be verified (centrally and peripherally) and it could be reduced through nonaggressive means (Bandura, 1973).

From a theoretical perspective, it is somewhat unfortunate that theorists rely to such an extent on the concept of arousal to "explain" the presumed relationship between noxious events and aggression. First of all, arousal is difficult to define, measure, and causally relate to specific behaviors. In fact, theorists are still not certain that arousal is a unitary concept. Second, the studies relating arousal to aggression have produced equivocal findings. Zillman (1983), following a thorough review of the literature, concluded, "arousal does not indiscriminately energize behavior—aggressive behavior in particular" Finally, arousal may simply be a concomitant of aggression. That is, arousal may not be causally involved in the instigation of aggression.

A study has never been conducted in our laboratory to specifically examine the effects of arousal on aggression. However, many of our studies have provided information relevant to this issue.

For the past 15 years we have been studying the effects of a variety of drugs on aggressive behavior. I have concentrated considerable attention on the instigative effects of alcohol. In a study by Shuntich and Taylor (1972), it was found that intoxicated subjects behaved more aggressively than subjects who consumed a placebo or did not ingest a beverage. Taylor and Gammon (1975) administered 1.5 oz or .5 oz of either 100 proof vodka or bourbon per 40 lb of body weight to male subjects. The results indicated that aggressive responding was related to the quantity of alcohol consumed. The high dose of alcohol instigated higher shock settings than did the low dose. A subsequent study, using identical doses of ethanol, replicated these results (Taylor, Vardaris, Rawitch, Gammon, Cranston, & Lubetkin, 1976).

It has been proposed that physiological arousal might be responsible for the alcohol–aggression relationship. According to Boyatzis' (1977) arousal model, alcohol produces a state of heightened arousal that is similar to the physiological state that accompanies aggressive behavior. Some of the presumed changes include increased heart rate, blood pressure, and blood sugar concentration. Boyatzis contends that "the general effect of alcohol consumption may be linked to interpersonal aggression through the individual's interpretation of his/her aroused state."

There are major difficulties with an "arousal" interpretation of the

alcohol-aggression relationship. First of all, there is some doubt as to whether alcohol consumption consistently increases physiological arousal. Second, as pointed out above, there are conceptual problems concerning the nature of arousal. Finally, and most importantly, we have observed that high levels of arousal induced by other drugs do not necessarily result in increased aggression. For example, Δ^9 -tetrahydrocannabinol (Δ^9 -THC), the active ingredient in marijuana, exerts its most prominent effects on the cardiovascular system. With a moderate dose, increases of 20 to 50 beats per minute are common. Yet, Δ^9 -THC appears to decrease the tendency to aggress. In one study, conducted by Taylor *et al.* (1976), subjects ingested a high or low dose of either alcohol or Δ^9 -THC. Subjects were told that they could receive any one of several drugs, including librium, alcohol, Δ^9 -THC, or a placebo. The subjects in the high-dose alcohol condition set significantly higher levels of shock than the subjects in the low-dose alcohol condition. The high dose of Δ^9 -THC, on the other hand, did not facilitate aggressive responding. Instead, relative to the low-dose condition, the high dose of Δ^9 -THC tended to suppress aggression. Myerscough and Taylor (1985) replicated and extended the above results. Subjects were administered either a low, moderate, or high dose of Δ^9 -THC. The high dose was .1 mg per kilogram higher than the high dose used in the earlier study. The subjects competed with a highly provocative opponent, programmed to constantly set intense shocks and attempt to deliver a shock that was twice as strong as pain threshold on two occasions. According to the results of the study, only the subjects in the low-dose condition evidenced an appreciable increase in shock settings. Relative to the low doses of THC, the high dose increased arousal levels and inhibited aggressive behavior. These findings are consistent with the literature concerning marijuana-induced violence. Tinklenberg (1973) concluded, after an extensive review of the literature, that "the available data on physiological and psychological effects of marijuana strongly suggests that marijuana does not usually induce violence"

Recently, a series of studies was conducted in our laboratory to examine the effects of amphetamines on aggressive responding. Amphetamines are widely used central nervous system stimulants, which increase most indices of arousal (e.g., heart rate, blood pressure). In one study, for example, subjects received either .08 or .32 mg per kilogram of dextroamphetamine in a liquid solution of dextroamphetamine sulphate elixir. One hour after the ingestion of the drug, subjects competed on the competitive reaction time task. While both systolic and diastolic blood pressure were observed to increase substantially, there was no appreciable increase in aggressive responding. Mean shock intensities

set by subjects in the low-dose and high-dose conditions were, respectively, 4.14 and 4.63. These findings have been replicated in two other studies recently completed in our laboratory.

The results of the studies described above are obviously not congruent with the traditional assumption of a direct relationship between arousal and aggression. While both Δ^9 -THC and amphetamine increase arousal states, Δ^9 -THC tends to suppress aggression and amphetamine appears to have a minimal impact on aggression. Alcohol, a depressant of the nervous system, increases aggressive responding. Obviously, it is time for researchers to reconsider the role of arousal in regulating hostile behaviors.

E. Social Pressure

Theorists have traditionally argued that the most effective means of controlling aggression is by reducing arousal levels or eliminating aversive stimulation. This emphasis has resulted in the neglect of what appears to be a more potent aggression-control strategy: social pressure. During the disturbances on college campuses in the late 1960s and 1970s, there was a great deal of speculation concerning the instigation and control of physical aggression. Some persons argued that violence was, in part, attributable to the persuasive efforts of small groups of bystanders. This "agitator" hypothesis suggested that the cajoling, persuasive behavior of bystanders could influence the expression of aggression of otherwise peaceful individuals. Conversely, the shootings at Kent State University also caused administrators, faculty, and students at numerous universities to consider programs to regulate dissent. One program that was widely adopted involved the use of student and faculty "marshals." Volunteer marshals were trained to enter an area of conflict and attempt to persuade the participants to behave in a nonaggressive manner.

Personal observation of "crowd" behavior suggested to this author that aggressive behavior might be effectively regulated by social pressure. I observed highly agitated students reduce their antagonistic responding and relatively tolerant, peaceful students perform highly aggressive acts under the influence of social pressure.

Borden and Taylor (1973) attempted to examine the immediate and persistive effects of social coercion by a small group of strangers using the competitive reaction time paradigm. The subjects' shock setting behavior was measured under three conditions: in the presence of persuasive observers, in the presence of silent observers, and alone. The group attempted to dissuade (i.e., coax, cajol) subjects from retaliating against

a highly aggressive opponent (who continually set "10s") or to persuade subjects to set high levels of shock for a very nonaggressive opponent (who continually set "1s"). The group was composed of members whose age and grade was comparable with the subjects. The confederate-observers had all undergone extensive pretraining and, as a team, were capable of being either "agitators" or "marshals" with a high degree of realism.

As expected, the subjects who competed against the nonaggressive opponents set low-intensity shocks when they were alone. However, when under direct social pressure from the small group of bystanders, the level of aggression against the passive opponent increased dramatically. The social pressure manipulation had an immediate and enduring influence on the subject's aggressive responding toward the nonattacking opponent. That is, the subjects continued to hurt the nonaggressive opponent following the removal of the group of "agitators." Pacifistic pleas by the group also had a potent effect on harming behavior. The subjects who were receiving relentless, noxious attacks from their opponent refrained from retaliating under social pressure to set minimal levels of shock. In this condition, however, the effects did not persist in the absence of the group. For instance, when competing against the aggressive opponent in the presence of a silent audience, the mean intensity of shock set by the subjects was 6.78. Under social pressure, the mean shock setting was 2.35. Following the removal of the group the mean shock intensity set by the subjects was 6.07.

This research demonstrated quite convincingly that the observed relationship between attack and retaliation can be drastically modified by social input from the immediate social surroundings. The practical implications of these findings were obvious: bystanders, whether in a tavern or on the street, can apply pressure and reduce an aggressor's attack behavior, even when they have no authoritative powers and are virtual strangers. As noted in the original article, observers of an aggressive altercation can ". . . exert a substantial degree of control over the aggressors' behavior by using a strategy of friendly understanding interspersed with specific suggestions."

Borden (1975) demonstrated that the perceived values of the bystander-observer can influence aggressive responding. In the first of two studies, Borden programmed the opponents to set relatively low shock intensities. During the first half of the competitive session, either a male or female observer was present. During the second half of the experimental session, the observer was absent. Borden observed that the male subjects were more aggressive in the presence of a male observer than a female observer. The second study replicated the first with the addi-

tional manipulation of the observers' values. In one condition, the observer was viewed as being a member of the Society Against Nuclear Expansion (SANE). He wore a jacket with a SANE emblem and presented himself as a cofounder of the pacifistic organization. In another condition, the observer was ostensibly an instructor in a karate club and wore an emblem to that effect. He showed a great deal of enthusiasm for this sport. Borden reported that the perceived values of the observers dramatically influenced the subject's aggressive responding. The subjects behaved much more aggressively in the "aggressive" observer condition than in the "pacifistic" opponent condition.

The potent effect of social pressure was further demonstrated to me in a study conducted by James Sears (1978). In this study, intoxicated and nonintoxicated subjects competed on the reaction time task in the presence of two confederate-observers. The subjects were given the opportunity to administer to their nonaggressive opponents an electric shock which was twice the value of the competitor's "unpleasantness" threshold, i.e., twice the value of the "10" setting. During the first part of the competitive session (no pressure), the observers made no attempt to influence the subject's behavior. During the second block of trials (mild pressure) the observers suggested that higher settings might provide more "excitement." The third block (strong pressure) was characterized by specific suggestions (no commands) as to which shock levels to set and social approval or disapproval contingent upon "compliance." During the last block (residual pressure) social pressure ceased.

Prior to the onset of the social pressure, neither the intoxicated nor the nonintoxicated subjects utilized the high-magnitude shock. Intoxicated subjects' use of the intense shock increased as the intensity of the persuasive social pressure increased. When exposed to strong social pressure, intoxicated subjects dramatically increased their use of the potentially injurious shock to 55% of the trials. The nonintoxicated subjects were highly reluctant to utilize the intense shock under any level of social pressure.

Taylor and Gammon (1976) attempted to use social pressure to modify alcohol-induced aggression. In the study, intoxicated and nonintoxicated subjects competed with a highly aggressive opponent (who set a mean shock intensity of 8.00). Half of the subjects competed in the presence of an observer who attempted to reduce their aggressive responding through verbal persuasion. The remaining subjects competed in the presence of a silent observer.

The purpose of the study was to determine whether social pressure could decrease the aggressive responding of subjects who had drunk large quantities of alcohol. The results were encouraging. Relative to the

no pressure condition, the intoxicated subjects behaved in a restrained manner. Instead of reacting aggressively to the initial series of attacks, the intoxicated subjects maintained their moderate basal aggression level. Even though the opponent's attack was intense, the inebriated subjects began to set lower shocks toward the end of the first block. During the second block, the subjects in the alcohol/pressure condition were highly responsive to the observer's persuasive comments. As noted by the authors, ". . . by coaxing, cajoling, and reasoning with the intoxicated subject, the observer was able to convince him to behave in a nonretaliatory manner, under highly provocative conditions."

In the above studies, subjects received direct social pressure to either increase or decrease their aggression. A subject could choose to succumb to the pressure of the group or resist the pressure. The contingencies were fairly well defined by the verbal behavior and body postures of the observers. When an observer stated, "Hey, this is boring; can't you make this more exciting?", it was pretty obvious to the subject that he could gain the observer's approval by increasing his shock settings. It would also be obvious to the subject that he could lose the observer's approval if he continued to set low-intensity shocks. On the other hand, if the subject shocked a nonaggressive peer, he would be violating a very basic behavioral norm. One simply does not attempt to harm a person who is acting in a nonthreatening, pacifistic manner. The subjects resolved their conflict by acquiescing to the demands of the bystanders. Thus, the effects of social pressure were prepotent.

F. Cognitive Control

The cognitive regulation of aggression was convincingly demonstrated in a number of the studies cited above. For example, communicated aggressive intent was shown to be a more potent instigator of aggression than frustration or arousal. However, the most dramatic evidence in support of the assumption that human aggression is cognitively regulated was observed in a series of studies involving the effects of alcohol on aggressive responding.

We have expended a great deal of energy attempting to determine whether or not a relationship exists between alcohol consumption and aggressive behavior. This effort has produced considerable experimental evidence that aggressive behavior varies as a function of the quantity of alcohol ingested (Shuntich & Taylor, 1972; Taylor & Gammon, 1975). We have also attempted to study means of reducing the aggressive behavior of intoxicated persons.

It has traditionally been assumed that the effects of alcohol on aggres-

sion are a result of alcohol's direct pharmacological action on certain inhibitory processes. Psychodynamically oriented investigators argue that alcohol releases suppressed aggression by weakening the censorship system. Physiologically oriented psychologists tend to assume that alcohol initially influences the portion of the brain responsible for the inhibitory control of behavior. As the result of the impairment of these cortical inhibitory processes, a pseudostimulation of lower, primitive centers of the brain is produced. This pharmacological disinhibition model assumes that alcohol has a direct, invariant impact on inhibitions and that humans possess a tendency to harm that would be expressed were it not for the inhibitory processes. This conception of the effects of alcohol is highly congruent with the conventional view of the behavior of the intoxicated person as being "irrational," "disinhibited," "out of control," and "volcanic."

One implication of the disinhibition model is that it would be difficult to regulate the aggressive responding of the intoxicated person. In fact, there is some evidence to support this view. It will be recalled that in the study conducted by Taylor and Gammon (1976), considerable social pressure was required in order to reduce the intoxicated subjects' aggressive behavior.

In a study conducted by Taylor, Gammon, and Capasso (1976), intoxicated and nonintoxicated subjects were allowed to compete with an opponent in one of two conditions. In what was labeled the "threatening" condition, the subject competed with a silent opponent. The condition was threatening because the subject could not be certain as to the level of shock the opponent would set. In the nonthreatening condition, the subject overheard the opponent say to the experimenter, "I have strong convictions about hurting people, and I'd feel more comfortable about this thing if I just set the one button all the time."

The behavior of the subjects in the threatening condition could be interpreted as supporting the disinhibition hypothesis. The intoxicated subjects instigated intense attacks against the opponent and continued to attack the opponent even though he set low shock intensities.

The intoxicated subjects' response to the pacifistic communication was neither irrational, "disinhibited," nor inappropriate. Instead, they behaved in a highly controlled, sensitive manner, setting low-intensity shocks initially as well as during the competitive session. The intoxicated subjects also evaluated their pacifistic opponents favorably. One subject stated, "My competitor was an extremely fair person who treated me better than I treated him."

The intoxicated subjects in the above experiment did not live up to their reputation. They intercepted a fairly complex message from a po-

tential adversary. The message informed the subject, indirectly, that the opponent had qualms about setting high shocks. Instead of taking advantage of the nonhostile competitor, the intoxicated subject conformed to the norm of reciprocity; he behaved nonaggressively toward a nonaggressive opponent.

These results were rather unexpected. The intoxicated subjects were not punished severely for behaving aggressively. Their arousal levels weren't reduced by means of a particular behavior therapy. In fact, they were highly aroused while competing on the task. There was no attempt to change their affective state by means of humor or sexual arousal. They simply overheard a message suggesting that their opponent did not have hostile intentions. The subjects, who had consumed a large quantity of ethanol, apparently processed this information and exercised self-control.

A number of studies have been conducted in our laboratory in an attempt to further examine the cognitive regulation of alcohol-induced aggression. Bailey, Leonard, Cranston, and Taylor (1983) investigated the effect of increased self-awareness on the aggressive behavior of intoxicated subjects. It has been proposed by a number of contemporary investigators that the facilitating effect of alcohol on aggression might be mediated by a reduction in self-awareness. For example, Hull (1981) suggested that "alcohol interferes with higher order encoding processes fundamental to a state of awareness by disrupting the selection of self-relevant information." As a consequence, intoxicated individuals are presumed to be less sensitive to self-relevant information regarding socially appropriate standards of conduct and are more likely to behave in an impulsive, aggressive manner. Bailey *et al.* (1983) manipulated self-awareness by having half of the subjects compete in the presence of a mirror and video camera. The rest of the subjects competed without the presence of a mirror and camera. The presence of such cues as a camera and mirror have been shown to induce self-awareness (e.g., Carver, 1974; Scheier, Fenigstein, & Buss, 1974).

According to the results of the above study, intoxicated and nonintoxicated subjects in the self-aware condition were less aggressive than subjects in the non-self-aware condition. This effect was observed on the initial trial and under conditions of increasing levels of attack. What are the implications of these findings? First of all, they suggest that alcohol influences aggression by changing a person's propensity to attend to self-relevant information. Second, they provide further evidence that induced self-awareness can reduce antinormative aggression. Finally, they demonstrate that cognitive variables play an important role in the regulation of aggressive behavior.

Jeavons and Taylor (1985) attempted to determine whether or not an intoxicated person would be responsive to an explicit nonaggressive norm. Prior to competing in the competitive reaction time task, half of the subjects were provided with a behavioral norm; the remaining subjects competed in the absence of any explicit norm.

Following the 3-minute task instructions, the experimenter asked if either the subject or the opponent had any questions. In a prerecorded exchange, the opponent asked the experimenter what levels of shock people typically set in the task. After briefly reminding the subjects that the purpose of the study concerned the effects of alcohol on competition, the experimenter specifically stated to subjects in the norm conditions that, "generally we find that most people who've been given alcohol tend to set shock levels ranging from 1 to 5." Subjects in the no-norm conditions, on the other hand, heard the experimenter reply, "I really don't know how to answer that question because I've never looked at that before."

The sober and the highly intoxicated subjects were responsive to the norm manipulation. On the initial trial as well as under conditions of increasing provocation, those subjects provided with the nonaggressive norm behaved less aggressively than did the subjects in the no-norm conditions. The authors concluded that "the provision of an explicit nonaggressive norm enabled sober and highly intoxicated subjects to modulate their aggressive responding even in a highly competitive and provocative situation." Supporting evidence that the subjects were actively processing the norm in order to regulate their responding was provided by the reaction time measures. During the competitive trials, the reaction time to set provided a measure of the time it took the subject to select a shock level for his opponent prior to the start of each trial. According to the results, the subjects who were given the norm had faster reaction times to set when their opponent was reacting in accordance with the nonaggressive norm than when the opponent was violating the norm. These results suggest that the norm influenced the subjects' decision regarding how to behave during the task. When the opponent's behavior was consistent with the norm, the decision of the norm subjects to respond less aggressively was facilitated. When the opponent violated the norm, the norm subjects showed an increased latency to choose and set a shock intensity for the opponent. The authors suggested, ". . . cognizant of the norm and now faced with an inappropriately aggressive opponent, the subjects deliberated about their decision of how to respond."

The results of the studies described above provided clear evidence that cognitive factors play an important role in regulating aggressive

responding. The studies provided cues to increase the subjects' self-awareness or redirect their attention to socially appropriate conduct. The subjects regulated their behavior accordingly; despite high levels of intoxication and provocation, when they heard a pacifistic message, observed a camera, or became cognizant of a norm, they behaved in a nonaggressive manner.

G. Social Anxiety

The subjects who participated in our studies demonstrated some variation in shock-setting behavior. The vast majority of subjects gradually increased their shock settings as a function of provocation. However, some subjects behaved in an extremely passive manner, setting "ones" on all trials, and others acted in an inordinately violent manner, continually setting "tens."

Given the behavioral emphasis, very little attention has been devoted to examining the influence of dispositional variables on aggressive behavior. It is possible, however, that some of the individual variation in the aggressive responding observed in our studies might be due to the personality characteristics of the subjects. A number of studies have been conducted in our laboratory to investigate this issue. These studies suggest that the subjects' sensitivity to social evaluation influences the tendency to initiate and maintain aggressive behavior.

Taylor (1970) examined the possibility that fear of social censure might inhibit aggressive responding. Subjects who scored on either extreme of the Crowne-Marlowe Social Desirability Scale were allowed to compete with an opponent who gradually increased his shock settings. It was observed that low-need-for-approval subjects chose high levels of shock across all trials. High-need-approval subjects, on the other hand, set low-intensity shocks initially and slowly increased the intensity of shock across trials. They never reached the levels selected by the low-need-for-approval subjects.

Dengerink (1971) selected high and low socially anxious persons by administering an early version of Lykken's Activity Preference Questionnaire. According to the results of this study, low-anxious subjects tended to behave more aggressively toward the opponent than high-anxious subjects. This was especially true under low-to-moderate levels of provocation. Dorsky and Taylor (1972) attempted to replicate this study with a different measure of anxiety, the Taylor Manifest Anxiety Scale (Taylor, 1953). The high- and low-anxious groups were not found to differ in their shock selections.

Dorsky (1972) selected subjects who described themselves as being

high or low anxious on both the social and physical anxiety subscales of the revised form of the Activity Preference Questionnaire. Dorsky reported that there was no appreciable effect of physical anxiety on the shock settings selected by subjects for the opponent. However, high socially anxious subjects were found to be less aggressive than the low socially anxious subjects.

These results suggest that aggression may be regulated more by experiences of social apprehension than physical anxiety. As noted by Dengerink (1976), "These studies all demonstrate that aggression may be inhibited by manipulations that increase the possibility of social disapproval."

III. CONCLUSION

Traditional theoretical perspectives concerning aggression control stress the importance of such antecedent conditions as frustration, pain, and arousal. Basically, it is assumed that if aversive events could be minimized and arousal regulated, acts of aggression would be substantially reduced.

A number of studies were conducted in our laboratory in which subjects were frustrated prior to the competitive task. The frustration manipulations had little influence on the subjects' aggressive behavior. Other studies were conducted in which subjects were programmed to win or lose the competition. Those subjects programmed to lose found that they were slower than their opponent on five out of six trials. Despite the fact that subjects in this condition received a larger number of noxious stimuli (e.g., pain cues), they behaved in a relatively nonaggressive manner.

Aside from the role of frustration and pain, the research findings also call into question the role of arousal in mediating aggressive behavior. According to subjective observation, some subjects became highly "aroused" prior to aggressing. Other subjects appeared to maintain their composure while setting an intense shock for the opponent. Furthermore, some highly aroused subjects behaved in a very passive manner during the task. In one study, subjects competed with provocative female subjects. Many male subjects who cursed, swore, and insulted the aggressive female competitor set low shock intensities throughout the session. On a more objective level, while amphetamine was found to increase arousal levels, it did not elicit higher levels of aggression.

The subjects in our studies were not appreciably influenced by frustration, pain, or arousal. However, there were variables that had a potent

influence on the subjects' shock-setting behavior. One of the most potent determinants of aggression was the degree of hostile intent communicated to the subject via the feedback lights. Subjects in the typical experiment found themselves competing with an opponent who gradually increased his shock settings. In response to the escalation in the opponents' attack, the subjects increased their shock settings. Studies conducted by Dengerink and his colleagues demonstrated that the aggressive behavior was due to the information that the subjects received from the opponent rather than the pain they experienced. When the subject received information that the opponent was escalating his attack, the subject retaliated, whether the shock levels actually increased or remained constant. In other studies, the subject tended to set the potentially injurious level of shock (the shock that was set at twice the subject's pain threshold) only after he observed that the opponent selected this shock intensity. This occurred even though the subject never actually received this intensity of shock.

The subjects in our studies were confronted with a very complex situation. They did not have any information, prior to interacting with the opponent, concerning the aggressive intentions of the opponent. Yet, the subjects tended to respond in a very similar manner during the competitive session. They set minimal shocks for the opponent on the first trial and increased their shock settings as a function of the opponents' communication of aggressive intent. It would appear as if the subjects entered the competitive situation with a "set" or "predisposition" to behave according to a norm of reciprocity.

Interviews with subjects suggested that they were adhering to a behavioral standard or norm. Many subjects stated, quite specifically, that they would not hurt someone unless they were hurt first. Other subjects made reference to the principal of "an eye for an eye." One subject stated that it was socially inappropriate to "strike the first blow." Thus, it would appear that most subjects did enter the competitive situation with conceptual representations which assisted them in regulating their aggressive responses.

Subjects were also extremely responsive to complex social demands, especially those which could provide social approval or lead to disapproval. Both male and female subjects were less aggressive toward a female target than a male target (Taylor & Epstein, 1967). The spontaneous comments of subjects competing with the aggressive female opponent indicated that they were aware of the norms concerning harming a female and made a conscious decision to control their aggressive behavior. One male subject attempted to maintain control with the following self-statements: "To hell with her . . . I ain't going up, I don't care . . .

I've got to be reasonable!" Another male commented, following the competition, "I kept it between one and three. I didn't want to give her too much." The presence of silent observers dramatically influenced the subjects' behavior. For example, the presence of male observers or observers who projected an aggressive image increased aggressive responding, while the presence of female observers or those who professed pacifistic beliefs decreased aggressive behavior (Borden, 1975). Observers were able to persuade subjects competing with nonaggressive opponents to increase their shock settings and to persuade subjects competing with hostile opponents to set minimal levels of shock (Borden & Taylor, 1973). In the last mentioned study, subjects were provoked intensely by their opponent and became highly agitated. Yet, they were cajoled into setting lower and lower shock intensities.

The results also demonstrated that those subjects who were relatively impervious to social disapproval, that is, were not concerned with "impression management," were most likely to initiate as well as maintain attacks against the opponent. The most aggressive subjects were those who were low in approval motivation, low in social anxiety, or who readily admitted to being racially prejudiced.

If there is one major conclusion one can draw from the findings presented in this article, it is that the traditional neoassociationistic models cannot readily account for the regulation of aggressive behavior. Instead, the results suggest that human aggression is controlled by attributions of aggressive intent (influenced by interpersonal communications), complex dispositional factors (e.g., social sensitivity), and social demands or instigations.

For the past 50 years, partly in response to early instinct models, psychologists have stressed the role of situational cues in the regulation of aggression. In the 1940s and 1950s the stimulus that received most of the attention was frustration. Defined as a blocking of a goal response, frustration was thought to produce an instigational process which inevitably led to aggressive responding. Aggression could be controlled by reducing frustration. During the 1960s, psychologists were still maintaining that aggression was the result of specific environmental events. Frustration was considered to be only one such antecedent condition. It was assumed that any environmental stimulus could become a potent determinant of aggression through association with aggressive events or increased arousal levels. Weapons were singled out for special attention, and there was considerable attention given by psychologists to gun control legislation. During the 1970s theorists argued that aggression was simply learned behavior, activated by a high state of arousal. The most potent determinants were still considered to be such aversive stim-

uli as pain and frustration. However, theorists also included such stressful cues as noise, heat, and crowding. Numerous behavioral therapies were developed during this decade to modify anger (e.g., desensitization), and psychologists strongly advocated reducing environmental stressors.

During the late 1970s, a few investigators began to suggest the possibility that social and cognitive processes might be involved in the regulation of aggression. However, the behavioral or neoassociationistic approach was still dominant. For example, in 1977 Baron wrote a widely read text entitled "Human Aggression." In this text, he devoted a chapter to the control of aggression. The majority of the chapter dealt with the traditional topics of punishment, catharsis, and incompatible responses. One small section of the chapter was concerned with the "cognitive control of aggression." Baron noted that "there can be little doubt" that aggression "is also frequently under the control of cognitive factors." Yet, the results of only one study were described, dealing with the esoteric topic of mitigating circumstances.

A more concerted effort is being made by a few contemporary theorists to convince the mainstream aggression researcher to devote some attention to the cognitive and social control of aggression. Donnerstein and Hatfield (1982) have discussed the roles of fairness and justice in determining aggressive responding. Hull (1981) has examined the role of self-awareness in the alcohol-aggression relationship. Prentice-Dunn and Rogers (1983) have described the cognitive conditions which appear to produce deindividuated aggression. Felson (1981) has described an interactionist approach to aggression, emphasizing the role of impression management theory.

There appears to be a great deal of resistance to accepting the importance of social and cognitive factors in the regulation of aggression. The current as well as traditional perspective appears to be that aggression is essentially reactive, impulsive, and irrational. The results of the research program described in this article suggest that aggression tends to be reflective, rational, and self-regulated.

An acquaintance of mine, a psychologist in a large state prison, was recently assaulted by an inmate. The assault took place during a routine interview. According to my colleague, the prisoner expressed his dissatisfaction with the opportunities and living arrangements at the institution. He wanted to transfer to another prison. A specific request was made for a transfer and the request was expeditiously denied. The inmate, presumably, struck the psychologist after the request was turned down. The prisoner's behavior, presumed to be due to frustration, was described as "out of control," "violent," and "crazy." A detailed ac-

count of the incident provided a very different analysis of the incident. Following the rejection of the request for a transfer, the inmate asked the psychologist, "Is there anything I can do to get out of this place?" The answer, ostensibly designed to relieve tension, had an unfortunate effect. The interviewer stated, jokingly, "Besides hitting a guard or someone else in authority, I can't think of any way!" The inmate leaned over the desk and struck the only authority figure present. Rather than being "out of control," the inmate's behavior was obviously deliberate.

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Punishment and Aggression: A Critical Reexamination

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I. INTRODUCTION

Several years ago one of the authors of this article attended a conference on aggression and was there approached by a scholar who had sat through each and every session without satisfaction at the outcome. He expressed dismay at the lack of adequate aggression control techniques and declared that, in view of the tremendous problems of aggression in society, he was willing to utilize virtually any technique which might actually prove effective. The author (no doubt anticipating the theme of this chapter) explained that such a technique—punishment—was in fact available; he went on to explain that, even in situations in which provocation for anger is at a very high level, the threat of immediate and substantial punishment usually appears to work very well in controlling overt aggressive behavior.

The questioner considered this statement. "But," he answered plaintively, "I don't want to live in that kind of world!" Ah, yes. There's the rub. There is no question but that punishment has a very poor reputation in many quarters, to the point that a substantial number of social analysts and members of the helping professions refuse to consider it as a suitable technique for use with social and individual problems. While the rejection of punishment techniques often is made without any regard to their efficacy, there is also a substantial school of thought that

holds punishment to be ineffective and another which maintains that punishment of aggression is specifically counterproductive since punishment *produces* aggression.

We will attempt to deal briefly with each of these positions, indicating that arguments against the effectiveness of punishment in the control of aggression are based on inappropriate or inadequate interpretation of data which suggest the contrary. We will go on to detail programs in which punishment is a necessary and effective component of treatment aimed directly at the reduction of inappropriate behaviors of children including aggression, and we will describe some child-rearing practices which may influence aggressive behavior by providing differential consequences for the child's aggressiveness. Finally, we will briefly touch on surveys of criminological research which suggest that the deterrent effects of punishments are not being adequately utilized in the criminal justice system. We will also attempt to describe some of the factors by which punishment techniques can be made more acceptable, as well as effective, in controlling aggression and other undesirable behaviors.

II. PUNISHMENT AND THE CONTROL OF BEHAVIOR

A. A Cautionary Definition

Punishment is one of those areas of knowledge in which a little learning is indeed a dangerous thing. It is all too easy to misinterpret a number of aspects of the case we are trying to make, and we would like to start off with an essential, and cautionary, definition: Punishment is the provision of a negative or aversive consequence for a behavior. In all the following, the goal of punishment is to reduce the future probability of the punished—aggressive or violent—behavior, for the punished person. This, then, is a deterrence model of punishment and not that of retribution, which involves the goal of suffering for the person who has been punished. There is an important ongoing debate about the comparative justice involved in deterrent and retributive models of punishment, suggesting that retribution may, in fact, offer advantages in some areas (cf. Hampton, 1984), but for the present purposes a deterrence model is generally more appropriate, and, again in general, more humane.

The concept of contingency is absolutely central to any treatment of punishment, and a failure to consider the issue of contingency has been responsible for many of the problems arising in this area. A spanking or a fine serves as a punisher when it is contingent on a specific behavior

which is to be eliminated. In the absence of this contingency the same event is still aversive but it is not a punishment. One will find no support in this article for the indiscriminate use of aversive techniques.

B. Is Punishment Effective in Controlling any Behavior?

It is far beyond the scope of this article to give a critical analysis of the effectiveness of punishment in controlling all undesirable behaviors. Nor is it particularly relevant, since the topic here is a good deal more specific than that. However, as a brief historical note, early formulations of the law of effect (Thorndyke, 1911, 1913) suggested an approximately equal though opposite effect on behavior of contingent punishing events, as compared to contingent rewarding events. This formulation, however, was modified by Thorndyke himself (1932) to suggest a substantial lack of symmetry for reward and punishment, with punishment having a smaller effect on behavior than does reward. The specific study on which this far-reaching change in viewpoint was based consisted of a runway task using chicks, in which the relative effects of reward (a combination of "freedom, food, and company" for choice of the right pathway) were contrasted with those of punishment (confinement in an end box for 30 seconds after choice of the wrong path). This particular reward was highly effective in enhancing runway-choice behaviors which were antecedent to it, while the confinement technique had little effect.

It is obvious that this specific task provides inadequate evidence on so important a point as the efficacy of punishment. However, additional work over the next 20 years added to the perceived problems of the punishment paradigm. Skinner (1938) made the point that punishment effects are often transient, while Estes (1944) indicated that the contingency between behavior and punishment is often unnecessary for an aversive event to reduce or suppress behavior in the aversive situation. This particular point is an interesting one. It does not indicate that punishment contingencies are not important; in fact, Estes demonstrated that the contingency between behavior and punishment can have effects in addition to those of noncontingent aversive events. What he indicated was that the effects of aversive events are so powerful that they can suppress behavior in the absence of a specific behavior-punishment contingency.

Despite the fact that Thorndyke's evidence was inadequate, that Skinner's point about the transience of punishment effects can be circumvented by procedural alterations, and that Estes provided data supporting both the substantial effectiveness of behavior-punishment

contingencies and the effectiveness of noncontingent aversive events, the "message attributed to these writers . . . was that punishment does not work" (Mackintosh, 1974). Work since these classic studies has done a bit to redress the balance: Despite the absence of any systematic attempt to compare reward and punishment effects in circumstances which make possible a reasoned judgment as to the overall effectiveness of these techniques in real situations involving people, it has at least become clear that punishment can sometimes be very effective in reducing behavior (MacKintosh, 1974).

The topic of contingency has received considerable attention in the animal experimental literature on punishment. In an extensive review of the relevant studies up to 1967, Campbell and Church (1969) found that contingent aversive events were clearly more effective than noncontingent aversive events. There were studies with contrary findings and these were also interesting in that they suggest the tremendous ability of high-level shocks to suppress or disrupt virtually all active behaviors in the shock situation. Nevertheless, contingent punishment can have dramatically more effect than noncontingent aversive happenings.

Such work emphasizes an interesting addition to the point first suggested by Estes (1944): insofar as an event is an effective punisher, it is also likely to elicit some response-impacting emotional and possibly behavioral reactions in the punished subject. These emotional/behavioral reactions presumably are associable with stimuli or behaviors in the situation and it is this associative mechanism which underlies the durable influence of punishment as opposed to any immediate disruptive effects which an aversive event may have. But what if the immediate response to the aversive event embedded in punishment is *not* incompatible with the behavior being punished? What if it causes *more* of that same behavior? It is this aspect of aversive events which has been most problematic in terms of a view that punishment can control aggression.

C. Do Aversive Events Cause Aggression?

The possibility that painful or aversive events produce aggression was initially raised in a 1939 study by O'Kelly and Steckle, who reported that groups of rats shocked through a grid floor showed rapid, high-level fighting. This "reflexive fighting" procedure, soon modified to involve pairs of rats or other animals rather than larger groups, was later extensively used as a simple and very reliable technique for the experimental study of "aggression" (Ulrich & Azrin, 1962; Hutchinson, Ulrich, & Azrin, 1965). This conjunction was enthusiastically taken up by students of human aggression as well, often with the emendation that any type of

unpleasant event—including bad weather, nagging aches and pains, and ugly people, in addition to the conventional insults and shocks—produces a tendency to aggression. This view has become an important component of the psychological explanations of aggression aimed at the general public as well as within the field. We possess, for example, a film in which a prison is shown, with numerous shuffling prisoners, as a backdrop for narration by a researcher identified with the “pain–aggression” hypothesis. This narration includes the message that such prisons are doomed to failure because punishment will make the prisoners more aggressive rather than reducing their antisocial behaviors.

Although this viewpoint has passed quickly into the arena where psychological research and public opinion interface, its research foundations are under serious attack. Identification of the behaviors elicited by pain as “aggression” runs counter to a recent distinction between defensive and aggressive behaviors in which the behaviors associated with “reflexive fighting” are seen as purely fear-based, defensive reactions (Blanchard & Blanchard, 1977, 1984a). According to this view, while pain and other threatening stimuli do elicit violent behaviors, these behaviors are much more likely to involve attempts to escape, hide, or otherwise avoid the aversive stimulus rather than attacking it. The conditions in which pain and threat lead to attack on the part of the victim are specifiable and tend to be very unlike those in which normal human aggression occurs. Moreover, most instances of human aggression appear to stem from circumstances (insults, resource disputes, etc.) which are a great deal more similar to the paradigm of offensive aggression than of defense. These considerations are outlined at greater length elsewhere (Blanchard & Blanchard, 1984a) and will not be repeated here. However, it is a reasonable summary that the differentiation of offensive aggression from defense is coming to be widely accepted as necessary for an analysis of animal and human aggressive behavior (i.e., Miczek, Kruk, & Olivier, 1984). And, specifically to the point, while defense (and the occasional, though typically less frequent, instance of defensive attack) is indeed potentiated by fear of threatening or potentially painful stimuli, such fear (Blanchard, Kleinschmidt, Flannelly, & Blanchard, 1984a) sharply reduces offensive attack.

This brief consideration of a complex area of research is doubtless unlikely to convince, and other sources should be sought for details (cf. Hutchinson, 1983; Blanchard & Blanchard, 1984a). For the purposes of the present topic, the important—and indeed noncontroversial—conclusion from this mass of material is that a view that punishment produces aggression rather than decreasing it is tenable only if one fails to accept the distinction between defense (including defensive attack) and

offense. If this distinction is accepted, or if one accepts as "aggression" all the pattern of aimed hurting activities directed by a rat or mouse toward an intruder into the first animal's territory or home cage, then the argument that aversive events produce aggression is not tenable; the opposite effect can easily be demonstrated (Blanchard *et al.*, 1984a; Frischknecht, Siegfried, & Waser, 1985).

D. The Natural Rewards of Aggression

Why does any extraneous consequence need to be used to control aggression? Aversive events can produce a range of unfortunate consequences (cf. Maurer, 1974), and while we will later argue that these can be somewhat controlled or minimized by attention to the parameters of punishment, it seems clear that even contingent aversive events are not without negative sequelae. This suggests that the most tactful means of dealing with aggressive impulses may be to attempt to reduce the incidence of those factors which promote aggression or to make certain that society does not somehow misguidedly provide extraneous rewards for aggressive behaviors.

Both of these are excellent ideas. However, there is something about aggression that makes it very difficult to fully control through these two maneuvers, pleasant, noncontroversial, and socially acceptable as they may be. In order to evaluate the possibility of controlling aggression through the use of totally nonnegative, nonaversive techniques, it must be considered that aggressive behaviors—like those of virtually every other important biobehavioral system—can be self-rewarding.

In terms of models based on lower animals, victory is reinforcing, both in itself (Scott & Fredericson, 1951; Blanchard & Blanchard, 1984a) and in terms of enhanced resource control (Wilson & Rogers, 1975). This suggestion of intrinsic satisfaction associated with successful aggression apparently applies to human behavior as well: male undergraduates who have been angered enjoy sessions in which they hurt both the person who has angered them and also an "innocent" bystander (Sebastian, 1978); also, high levels of feedback indicating that the victim is suffering pain increase the aggression shown by angered men (Sebastian, Buttino, Burzynski, & Moore, 1981). Interviews with highly aggressive prison inmates are also in agreement with the view that aggression can be highly satisfying and ego enhancing to such individuals (Toch, 1969), while teenaged "bullies" report that watching a peer being attacked and harassed is exciting (Ekman, 1977).

We have personally experienced the force of this satisfaction through interviews with highly aggressive college students. When asked to describe their feelings after successful acts of aggression (those which the subject felt he/she had "won"), ranging upward to, and including, homicide, these individuals usually expressed intense satisfaction. Quite often the satisfaction was considerably mixed with feelings of guilt or disgust or was tempered by fear of the consequences. Nevertheless, some satisfaction is apparently the normally expected outcome of successful aggression, at least in self-described highly aggressive subjects.

The other factor, extraneous reward for successful aggression, usually in terms of possessions or privileges, may be seen in a recent study by Felson (1983), who found that the vast majority of agonistic interactions among siblings involve disputes over the use of objects or over privileges and duties. It is clear in context that these confrontations are aimed at the enhancement of access to such objects or to gaining of privileges and avoidance of duties. Although only the victor is directly rewarded, the connection between victory and reward is equally apparent to victor and vanquished. Thus sibling fights, which are among the most common agonistic encounters in childhood, may be seen as a sort of training ground, teaching the lesson that aggression can involve both specific material goals and the possibility of enhancement of one's position or respect vis-à-vis the other.

If aggression brings its own satisfactions, then the question of external consequence is brought into sharper focus. If there is any such thing as a behavior which is truly neutral in its outcome, then presumably this action should be greatly influenced by any extraneous but contingent reward or punishment. When a behavior brings its own satisfactions, then control is not so much a matter of the balance of extraneous consequences as it is a loading of negative consequences to offset the magnitude of intrinsic rewards, insofar as those rewards are realized. This viewpoint suggests that two aspects of control are important in the ontogenetic development of aggressive tendencies. The first is the extent to which children are allowed to continue aggressive acts to the point of realizing victory or defeat, and the second is the provision of extraneous but consequent and contingent reward and/or punishment. This leads directly to the concept that, insofar as a given family or a given society permits aggression to be rewarded by its "natural consequences," and insofar as it does not provide rapid and relatively certain punishments for aggression, then aggression will be prevalent in that context.

III. THE PRESENT USE OF PUNISHMENT IN THE APPLICATION OF PSYCHOLOGICAL TECHNIQUES TO THE CONTROL OF AGGRESSION IN CHILDREN

A. Incidence and Acceptability of Punishment Techniques with Problem Children

It is perhaps a minor irony of the aggression literature that, in the absence of any real settlement of some of the major theoretical questions involving the use of punishment with undesirable behaviors, punishment as a technique for behavior control has quietly returned in the form of applied clinical studies of children; moreover, this literature is now becoming sufficiently extensive as to provide much of the direct evidence on the efficacy of punishment.

Nevertheless, punishment techniques remain a definite minority in such situations. A recent examination (Forehand, Middlebrook, Steffe, & Rogers, 1984) of articles dealing with child behavior therapy indicated that by far the most frequently treated problem behavior in children is "acting out," which includes aggression, noncompliance, destruction, and disruptiveness. "Acting out" alone constituted approximately one-third (32%) of the behaviors for which relevant journal articles reported treatment results during the period 1970–1982. This same survey, however, suggested that the techniques used to treat behavior problems in children are heavily slanted toward the use of positive rather than negative consequences (a ratio of 2.38 to 1.00), with negative consequences constituting only about 20% of the reported usage of therapeutic techniques. From the figures given in that article it cannot be determined if the "acting-out" children received a disproportionate share of the punishment therapies. However, only if negative consequences were used *exclusively* with acting-out children is it possible that as many as 80% of acting-out children were treated with negative consequences, either alone or in combination with other techniques. If one assumes the contrary, that there was no specific tendency for punishment therapies to be used differentially with the "acting-out" category, then as few as 20% of acting-out children received treatments involving negative consequence of their aggressive, noncompliant behaviors. Thus, a substantial proportion—somewhere between 20 and 80%—of "acting-out" children are treated by techniques involving no negative consequences for their undesirable behaviors.

One rationale for the relative lack of use of negative consequences in therapy is that almost everyone—undergraduate students (Kazdin,

1980), child psychiatric inpatients, parents of the patients, staff at the unit (Kazdin, French, & Sherick, 1981)—agrees that positive consequences are more acceptable than time-out consequences, which are in turn more acceptable than drug treatments. Time out is probably a great deal more acceptable than most forms of negative consequence. However, even this mild form of punishment was generally much less acceptable to any of the participants in the process than were positive treatments. It is particularly interesting that treatment acceptability was not influenced by the efficacy of the treatment (Kazdin, 1981).

However, some of the more extensively investigated and apparently successful treatment programs aimed specifically at acting-out type problems do include negative consequences as one treatment component. One such program, based originally on the work of Hanf (1969), has been described in a number of studies by Forehand and his associates. This work involves work with clinic-referred noncompliant children and their mothers, with the therapeutic goal of increasing compliance. It might be noted that, although the behavior disorder under treatment in these children is labeled "noncompliance," the concept of noncompliance is basically a convenient umbrella to cover a range of voluntary behaviors which the parent finds undesirable but is unable to control. In actuality, this category includes many instances of aggressive or destructive behavior, in addition to simple disobedience of parental instructions. In terms of research within a laboratory setting, noncompliance is a very convenient rubric, being easy to produce, measure, and thus consequate, on demand: the mother has only to give an instruction or command, which the child must then obey or not. Insofar as these children have what their parents regard as problematic aggressive behaviors, these aggressive behaviors are part and parcel of the noncompliance syndrome. Of course, if the child's parents do not regard aggression as problematic, such behavior does not fall within the scope of these programs.

In most of these studies, time out (sitting in a chair for a 2-minute period) is used as the most frequent negative consequence. The mothers are taught to give instructions clearly and wait for compliance. When child compliance with maternal instructions does not occur within a specified period of time, the mother initiates a time-out routine by pointing out to the child that he/she has not complied with the requested task (which is briefly redescribed) and stating that the time out is the result of this noncompliance (Day & Roberts, 1983).

Children often resist the time-out procedures, showing tantrums and attempts to escape during early training. When the child continues to

resist, refusing to remain quietly seated on the chair for the obligatory period, the mother is instructed to spank the child, with two target-specified spanks being given (Roberts, 1984). It is notable that the time-out procedure was not effective when the children were not spanked (or further punished) for time-out refusal (Bean & Roberts, 1981). An alternative consequence for children who refused to comply with time-out instructions involved placement of the child in a closet with exit prevented by a barrier for the time equivalent of the standard time-out procedure. This proved to be as effective as spanking (Day & Roberts, 1983). Further variations include warned versus unwarned time outs. These appear to be equally effective. However, since the warning procedure involves equally good results with lesser numbers of actual time outs required (Roberts, 1982), it may be less objectionable.

Such treatment programs are reported to result in behavior change for both child and parent and high levels of client satisfaction (Peed, Roberts, & Forehand, 1977; McMahon, Tiedemann, Forehand, & Griest, 1984). In analyzing the potential generality of these results, several factors should be noted. First, the program used by Forehand and his associates was designed specifically for use with young children, typically about 3–7 years of age. Second, it is specifically designed to enhance child compliance to parental instruction. In fact, the parent may be learning more than the child, especially with regard to the need for clear instructions and explanations and prompt, appropriate consequences of either a positive or a negative type. Since it is the parent who is specifically trained, it is not surprising that these programs do not generalize well to the behavior of the child at school, where the parent is not a factor (Forehand, Sturgis, McMahon, Aguar, Green, & Greiner, 1979), but that siblings as well as the clinic-referred children show increased compliance after training (Humphreys, Forehand, McMahon, & Roberts, 1978).

B. Is the Clinic-Referred Child Noncompliant or Aggressive because of Inadequate Parental Consequence?

Additional studies from this setting also suggest some of the reasons why the acting-out or noncompliant child is that way to begin with. A consistent finding is that their mothers are different: maternal depression appears to be a major factor influencing the mother's view of the child as noncompliant and may have the additional effect of actually producing noncompliance in the child. In fact, maternal depression is a better discriminator between clinic-referred and non-clinic-referred

groups than is child behavior (Griest, Forehand, Wells, & McMahon, 1980).

Although an acting-out, noncompliant child may certainly contribute to maternal depression, it seems unlikely that the sometimes modest compliance deficiencies of the referred children are responsible for the enormous differences in depression for the mothers of the two groups. A more reasonable explanation is that mothers of clinic-referred children often have multiple, serious problems in addition to the problem posed by the child. These problems also sometimes interfere with successful outcome of therapy (Griest & Forehand, 1982).

One mechanism by which maternal depression and extraneous family problems could impact the child's behavior is that mothers distracted or immobilized by their depression may provide less appropriate consequence for either desirable or undesirable behaviors. The impact of this reduction should be seen against a normal baseline: even normal mothers do not consequence all that well; one study indicated less than 8% negative consequence of undesirable mealtime actions of children by any of the *normal* mothers being studied, prior to training. This low level was obtained despite the "face to face" mealtime setting, with the television off and no other adults present. When these mothers increased their levels of timely and contingent punishments—to about 25%—their children's undesirable behaviors dropped between 50 and 80% (McMahon & Forehand, 1978).

It seems clear that mothers of clinic-referred children have some special difficulties in this regard. For one thing, they tend to give many more commands than normal mothers (Forehand, King, Peed, & Yoder, 1975; Delfini, Bernal, & Rosen, 1976). In one study, the mothers of a group which subsequently dropped out of training gave an average of 2.4 commands to the child, *per minute*, over a total of 160 minutes (on four different occasions) of home-based observations for each mother-child dyad. This rate clearly does not permit adequate compliance, nor is it likely to allow adequate maternal consequence of either compliance or noncompliance.

In another long-term, intensive research program on treatment of problem behaviors in children, Patterson (1979) also suggests that systematic failure of appropriate parental consequence is a major factor in children's behavior disturbances. One especially interesting facet of this is the "nattering" parent, who presents a variety of unpleasant reactions/stimuli to the child. Although some of these "natters" are in response to the child's inappropriate behaviors, it is notable that nattering does not stop the behavior, apparently being largely verbal and moreover not leading to any significant escalation of the threat of additional

punishment. It is very easy indeed to see how the concept of "nattering" fits beautifully with the finding of parental depression for noncompliant children, since both combine a pervasively negative parental response mode with the lack of any efficacious action. It also is easy to determine that the lack of effect of nattering is a function of parental behavior rather than lack of responsiveness to punishment in the child: when parents are taught to "stop" child behaviors rather than simply nattering, child behavior changes for the better very quickly (Patterson, 1983). An additional phenomenon relevant to the nattering model of parental reaction to children may be found in animal research indicating that punishment of early responses in a behavior sequence produces greater response suppression than equivalent punishment of later responses in the sequence (Campbell & Church, 1969). Thus, even if nattering parents do occasionally end the nattering sequence with a real punishment, and even if this nattering sequence was in fact contingent, on some occasions, on a child's bad behavior, the effectiveness of the punishment would be much attenuated.

C. Separation of Effects of Contingent Reward and Punishment

It must be noted that the parents being trained in most of these studies were simultaneously taught to increase the rate and contingency of rewards for their children's appropriate behaviors, and these appropriate behaviors correspondingly increased over the same time period as that in which undesirable reactions declined. Thus, the results of these studies, and indeed all those using a combination of reward and punishment training for parents and children, cannot be attributed solely to increased efficacy of negative consequence. Still, it does seem more likely that contingent negative consequences should more directly affect the behaviors which they immediately follow than that this dramatic alteration should solely reflect competition between undesirable behaviors and appropriate behaviors which have increased through reward. Patterson found that teaching nattering parents to act leads to rapid improvement in their children; this strongly suggests that punishment alone can have good results. The Bean and Roberts (1981) study previously described also indicates that punishment may be a *necessary* component of treatment with clinic-referred children.

Additional separation of these effects may be found in studies using contingent maternal attention alone. Contingent maternal attention is effective in modifying behavior in nonclinic-referred children. It is thus very interesting to note that maternal attention alone is not effective

with clinic-referred children (Roberts, Hatzenbuehler, & Bean, 1981). It seems rather likely that the nonresponsiveness of clinic-referred children to attention alone may be another facet of the "nattering parent" phenomenon. Normal children learn that their parents do distinguish between good and bad behaviors and (at least occasionally) reward the first and punish the second. Maternal attention is a signal that this contingency mode is more likely to be put into action. (Recall the care taken by many young children to ascertain that a parent is distracted or otherwise engaged before undertaking activities that are likely to be punished if detected.) Since the depressed or "nattering" parent does not give effective contingent punishments, parental attention should be a less effective cue for clinic-referred children, which fits beautifully with the Roberts *et al.* (1981) finding.

Inappropriately consequenceing parents, like unhappy families, differ one from the next. It takes little imagination to see that a deeply depressed parent may be inattentive to almost any needs or behaviors of a child, while one who is more agitated and hostile may tend to punish any child behavior which catches his/her attention. Another type, which does not appear to come so often to the clinic system, is the parent who basically ignores a child but at least intermittently rewards any behavior so blatant that it cannot be ignored. Since the good behaviors of a child can easily be ignored, this parental behavior pattern tends to result in the classic "spoiled child" who tantrums for attention and gifts. While these different parental behavior modes might be expected to produce varying reactions on the part of the children involved, one aspect—that the child is out of control—should be similar.

What is also similar is the appropriate treatment. One is struck, in reviewing this literature, with the notion that most of these "clinic-referred" children are responding normally to abnormal parental consequence of their behaviors. In fact, most of these studies do not include children with notable organic damage, autism, or other strikingly abnormal symptomatology. There are suggestions that when psychoses or severe neurotic conditions are present, consequence (including punishment) may be less effective in changing behavior (Gendreau & Ross, 1979). However, for the—very substantial—group of acting-out children without signs of significant mental abnormality, appropriate consequence of behavior on the part of the parents and significant others in the environment is probably all that needs to be done. This is doubtless more true for young children than for older persons: adolescents and adults are not only more established in their habits and value systems, but also have had more opportunity to experience the various rewards of aggression, rewards which are very real and tangible in any society

which does not deliberately act to reduce aggressive behavior. But for the young, parents and family should normally serve as the spearhead of attempts to intervene in the development of abnormally aggressive modes of relating to the world.

IV. SOURCES AND EFFECTS OF VARIATION IN SOCIAL/FAMILIAL PUNISHMENT FOR AGGRESSION

A. Familial Variation: The Delinquency Literature

One data set which has not yet been mentioned is the classic delinquency literature. It provides a rather stringent test of the hypothesis that punishment can control aggression, because this literature (cf. Glueck & Glueck, 1950; Hirshi, 1969) strongly suggests just the opposite effect, that punitive parents produce delinquent children.

Agnew (1983) has recently argued that this well-documented relationship may nevertheless be based on inadequate analysis. He reanalyzed data from a large-scale study of 2213 high school boys (Bachman, O'Malley, & Johnston, 1978) to extract a dimension of parental "inconsistent demands" which was found to be significantly related to the use of physical punishment methods by parents. Although the earlier analyses, consistent with other literature in this area, indicated that "punitive parents" were associated with high levels of sons' delinquency, Agnew's reanalysis showed that this was true only for those parents who made "inconsistent demands." And, indeed, there was a substantial tendency for the children of such inconsistent and severely punishing parents to be delinquent. However, when parental demands were consistent, physical punishment had a deterrent effect—albeit slight—on delinquency. The slowness of this effect should be evaluated, however, by noting that this deterrent effect was in comparison to a large group of subjects most of whose parents did not use heavy physical punishment and who presumably represented a cross-section in terms of consistency of demands. Thus, certainly for heavily punishing parents, consistency of demands has a striking impact, dividing the sons of these parents into two groups, one of which was much more delinquent and the other less delinquent than the norm for the sample.

Agnew's work strongly suggests that a reexamination of this area may clarify differential effects of general parental hostility, as opposed to parental negative consequence, on children's behaviors. The literature on "punitive" parents suggests that many of these are people who are

basically hostile or indifferent to their children. As the Agnew analysis indicated, the tendency to give severe physical punishments is significantly associated with a noncontingent punishment mode. However, the real culprit in such "punitive" parent-child relationships may not be the physicality of this treatment, *per se*, but the lack of parental regard it mirrors and implies.

Dan Olweus (1984) has data on the interactions of all of these factors. Using Swedish schoolboys as subjects, he reported a strong effect of "maternal permissiveness for aggression" on "bullying" of other children by the sons of these parents. This effect is almost matched, however, by that of parental negativism, which is largely independent of the "permissiveness" factor. While these hostile parents are also more punitive than normal (mothers' negativism correlated .586 with parents' use of power-assertive methods), Olweus found that the use of "power-assertive" modes was less well related to sons' bullying than were the other two factors. Moreover, the fact that "hostile" or "negative" or "depressive" parenting modes have similar effects in the United States, where physical punishment of children is common (Gelles, 1980), and in Sweden, where it is illegal, suggests that a parental attitude of denigration and lack of respect and valuing of the child can, in conjunction with lack of consequence for aggression, produce a hyperaggressive child even when physicality of punishment is not a factor (Blanchard, 1984).

B. Aggression and Child-Rearing Styles in Two Cultures

While both clinical studies and the delinquency literature deal with selected subpopulations within a culture, a view that the magnitude of aggressive behavior is a function of differential punishment for aggression suggests that culturally influenced child-rearing styles or strategies may also be a fruitful topic for investigation as determinants of aggressiveness.

It is clearly beyond the scope of this article to present an adequately detailed consideration of the relationship between culturally based child-rearing styles, consequence of aggression, and aggressiveness of children and adults in such cultures. For one thing, data on the conjunctions of these specific factors are hard to find, and for another, there are so many important differences from one cultural setting to another in the factors which elicit and maintain aggression that interpretation of rates of personal violence is a problem even when the dependent variables are comparable (this last being an additional problem). Accordingly, what follows is a single set of comparisons, based on data which

are at least comparable in the sense that they were gathered on two ethnic groups in the same location.

Some years ago the authors of this article compared arrest rates for crimes of violence among persons of different ethnicities in Hawaii (Blanchard & Blanchard, 1983). The variation was extreme, with persons of Japanese ancestry being arrested at about 25% of the expected rate and persons of Samoan ancestry being arrested at up to 1000% of the expected rate, depending on the specific violent crime. Confirmation of this indication of considerable differences in overt violence for the two groups may be found in statistics from the Hawaii Department of Education. A large-scale survey of school children across the state indicated that students of Samoan (and also Hawaiian) ancestry are singled out by their peers as the "troublemakers" in public schools. A third indication of substantial differences in violence for persons of Oriental as opposed to Polynesian ethnicity may be found in self-reports of violence among community college students in Hawaii, in which Hawaiian students reported the highest rates and Japanese and Chinese the lowest (Blanchard & Blanchard, 1983). The Samoan sample in this study was so small that it was not reported. The agreement between these three indices strongly suggests the validity of this phenomenon of ethnic or cultural differences in overt aggressiveness between these groups.

However, one should attempt not to be simplistic about this phenomenon. There are a number of socioeconomic and cultural factors which are undoubtedly involved. Variation in child-rearing techniques should not, cannot, be regarded as the sole contributor to this difference. It is notable, however, that traditional child-rearing techniques for the two groups are strikingly in agreement with the view that aggressive behaviors vary in accordance with their expected consequences.

Maternal care in traditional Japanese society follows a very consistent and specific pattern which is in many respects different from that of American mothers (Conroy, Hess, Azuma, & Kashiwagi, 1980). Japanese mothers (even in Hawaii) (Hawaii Department of Health Yearbook, 1984) tend to have small families and to lavish time and attention on each child. They are both demanding and supportive of their children, molding each child consistently toward serious and constructive educational, social, or career-oriented activity (Goldstein & Ibaraki, 1983). Almost all activities of small children are very closely monitored by the mother or a close mother-substitute (often grandmother), and children are discouraged from playing "in the street" or otherwise away from adult supervision. This proximity, which often continues in school-aged as well as preschool children, makes it possible for the mother to react immediately to inappropriate child behaviors.

A consistent theme in child-rearing of Japanese families is the important role of the child in maintaining the honor of the family. Comparatively minor misbehaviors, which would be unlikely to attract parental notice or punishment in most American families, tend to be scrutinized in the traditional Japanese family on the basis that they might reflect on the family's reputation or honor. This great interest in the social and reputational consequences of the child's behavior may be seen in the very high proportion of disciplinary methods of Japanese mothers which involve explaining to a child the social/physical consequences of his or her misbehavior and a display of maternal distress and other negative emotions. Persuasion tends to be used much more often by Japanese than by American mothers, an indication that extended discussion concerning misbehavior may be the mode, rather than citing of rules or authoritarian pronouncements (Conroy *et al.*, 1980). While physical punishments do not appear to be all that infrequent, this pattern of maternal persuasion and distress, the emotional component of which can escalate to include rejection of the misbehaving child, is probably the most common and most effective disciplinary mode used in Japan. This specific form of punishment is much less systematically used in the United States and most of Western Europe than in the Orient, and its effectiveness in a closely knit family is sometimes startling.

In considerable contrast to the traditional Japanese norm, Samoan families in Hawaii tend to have many children (Hawaii Department of Health Yearbook, 1984). Perhaps in part for this reason and because of the mild climate and rural nature of traditional Samoan society, Samoan mothers, here as in Samoa, do strongly encourage even very young children to get out from underfoot, to settle their own disputes, and in general to be largely independent of adult supervision from an early age. In fact, in Polynesian cultures generally, the child who hangs around adults asking questions and soliciting attention is considered to be rather lacking in manners (Pukui, Haertig, & Lee, 1972). Older children of the family are expected to care for the younger ones and it is by no means uncommon to find 7- or 8-year-old girls having almost maternal responsibilities for toddlers.

This arrangement results in children spending much more time with other children than with adults. It is to be expected that in such groups, the older children will provide some discipline to the younger, but it is by no means certain that the specific behaviors punished or rewarded by these disciplinarians will be those that the mother would have dealt with in the same fashion. It is also unlikely that the older siblings provide as systematic consequencing as would adults or that it will be aimed toward educational or career goals as in the typical Oriental family.

In addition to peer rewards and punishments, many of the consequences of children's behaviors in such a group are likely to be direct and physical. If a child does something dangerous, rather than getting a rescue and a scolding from mother, the child may get hurt. In most cases this system of natural consequences is probably quite effective and may indeed teach exactly the same lesson as does maternal intervention: This activity is dangerous; don't do it! When it comes to aggression, however, the Japanese and Samoan child-rearing practices would be expected to have very different effects.

Overt aggression among children is an activity which is quite likely to elicit immediate maternal intervention and consequence in the traditional Japanese family. Thus, the putative rewards of aggression would typically be blocked and prevented by the swiftness of intervention, and negative consequences would be additionally supplied in short order.

In the traditional Samoan family, the mother would likely be unaware of many aggressive encounters among the children until they were over. Such happenings are therefore often allowed to progress to their own natural conclusions, whatever these might be. Usually one child, or one group of children, would win, and the other be defeated. Thus, the winner would be rewarded by victory (and any other resource at issue in the fight), while the loser might be hurt or disgraced, which would doubtless make him or her somewhat more cautious next time, especially in dealing with the same or a stronger opponent. However, in subcultures of the young, with children and teenagers acting largely without the interference of adults, scrappiness and the willingness to fight in response to challenge tend to be highly prized attributes. Thus, even for those who are often defeated, a tendency toward violence may pay off in terms of prestige and also in terms of not being picked on as often. Finally, a taste of the bitterness of defeat also promotes the idea that victory must be sweet indeed. Thus, both victor and loser learn that there are rewards in fighting. The value of building up a coterie of friends who can be counted on for mutual aid is also clear in this context.

In some ways (certainly not all) this situation is comparable to Wolfgang and Ferracutti's (1967) "subculture of violence" among inner-city teenagers—a typical low level of systematic adult supervision for children and teenagers, with violence resulting in "natural consequences" which include enhanced prestige among a strong peer group and possibly material rewards as well; the development of peer structures organized in considerable part to enhance the effectiveness of whatever aggressive or defensive acts the person might get involved in;

and great interest taken in martial arts and frequent carrying of weapons by those who are most likely to be involved in aggressive acts.

In sum, because of traditional child-rearing techniques, individual aggressive behaviors by children in Japanese families would be expected to result in early intervention and almost exclusively negative consequences, while many such aggressive acts would be carried to their natural conclusion and rewarded for children in a typical Samoan setting. This might be true even if the actual values of adults in the two groups with reference to aggression were similar and negative, because the Samoan (and generally, Polynesian) child is more or less free to encounter the natural consequences of his acts, while the Japanese child is much more directly controlled by social mechanisms stemming from the traditional close mother-child relationship.

An important distinction should be made here. None of the above should be taken to suggest that children reared in traditional Japanese families are nonaggressive, never angry, incapable of doing wrong, etc., or that Samoan children are all just the opposite. In fact, it is an oversimplification to believe that either culture is opposed to all aspects of aggression or that either finds all aspects acceptable; Japanese children in both Japan and Hawaii can be fierce competitors in sports, school, and other approved arenas. The point is that traditional Japanese society is strongly controlled. Unsanctioned forms of aggression (which include all but a very few acts of personal violence) are swiftly and surely punished and seldom occur, while approved behaviors, some of which involve violence or are related to aggression, can and do occur. Conversely, we have elsewhere (Blanchard & Blanchard, 1983) pointed out that the relative indifference of Polynesian families to many personal acts of aggression does not include aggression directed at family or community elders, which is likely to be strongly punished. Polynesian children reared within this traditional context tend to be very respectful of their elders and are open and pleasant to persons accepted within the extended family group. Yet the differences in overt aggressiveness toward peers for children and youths of Japanese and Samoan ancestry in Hawaii appear to be genuine and important.

C. Consequence and the Development of Self-Control Mechanisms

The relationship between culture and aggression cannot in conscience be left without the mention of two other topics. First, the above discussion of child-rearing styles touches only lightly on the topic of cultural

and familial values, the accepted wisdom of the group as to what is important and worthy and what is not. Such cultural values are not usually taken to constitute a topic within psychology. However, insofar as these values determine what actions a specific culture or family tends to reward or punish, they deserve explicit attention as part and parcel of the dynamics of violence control.

But a cultural value is to some degree separable from its effectiveness in society. One of the interesting facets of the above discussion of child-rearing practices and aggression is that differences in aggression are predictable between cultures which consequate this behavior differentially, regardless of the underlying cultural values of the groups. It may be that some cultures, and indeed some families, are simply more effective at communicating and enforcing values, and the mechanisms underlying this effectiveness additionally deserve attention.

The individual's "moral conscience" can also have important effects on individual behavior (Kohlberg, 1969), including aggression (Bandura & Walters, 1959). In fact, one might well view the development of this moral sense as being one of the most important components of the socialization of children. What is particularly interesting about conscience in the current context is that its development may depend in large part on the same reward and punishment factors which are responsible for much of the control of behavior in general. Piaget has suggested (1965) that consistent punishment, involving explanation and discussion of the reasons that punishment was appropriate, is an important factor in creating the cognitive structures underlying moral development. In this regard, both the immediacy and contingency of reward or punishment for behavior contributes to knowledge of what is right or wrong, while verbal explanations should relate the specific act to significant factors in the situation and perhaps provide more general principles for later use. Signs of joy or of distress from significant others in response to a child's behavior aid tremendously in imparting emotional coloring to this cognitive system.

Specific rewards and punishments are by no means the only contributors to conscience development; such factors as the child's basic sense of self-trust and self-confidence are also involved (Ekstein, 1964). These contributors to conscience development are in turn influenced by the factors of parental appreciation and respect for the child which were briefly discussed in the preceding section on parental "punitiveness." Thus, conscience development, while somewhat orthogonal to the development of external social control through reward and punishment, might be expected to be facilitated by the same conditions which generally lead to good social control.

D. Social Punishments for Adult Aggression

As the above studies suggest, aggressive behaviors of children may have strikingly different probabilities of negative consequences in different cultures and different families. For adults also, both cultural variation and demographic and familial variation within a culture can result in widely differing consequences for aggressive behavior, these consequences being mediated by one or more of a number of informal social control mechanisms or agencies.

Some of these agencies are similar for children and adults. First, the offender's own family; tightly knit, controlling, family systems can provide potent punishment for aggression, should that cultural group disapprove of such behavior. Of course, the same type of tightly knit family in a culture accepting violence might protect and reinforce the offender rather than providing punishment. Another aspect of the effects of familial consequence of violence may be found in sex differences. In most cultures, families tend to be somewhat less perturbed by violent or aggressive acts on the part of males than females (Maccoby & Jacklin, 1974; Blanchard & Blanchard, 1983).

The likelihood of significant retaliation by the victim serves as another aspect of the informal, extralegal punishment applicable to aggressive acts. This has been demonstrated in laboratory studies (cf. Donnerstein & Donnerstein, 1973, 1975; Donnerstein, Donnerstein, Simon, & Ditricks, 1972; Wilson & Rogers, 1975), with less aggression shown by male college students when they believed that their victim would be able to retaliate. Lagerspetz, Bjorkqvist, Berts, and King (1982) also present data relevant to this relationship: in a sample of 434 12- to 16-year-old youths, a major factor distinguishing both bullies and their victims from the larger group of normal children was strength. The bullies were especially strong children, and they appeared to selectively pick on weak victims. Much the same mechanism may be involved in a very different context: as was noted earlier, in a large-sample survey of school children in Hawaii, students of Samoan and Hawaiian ancestry are singled out as especially likely to be the school "bullies" (Blanchard & Blanchard, 1983). One aspect of ethnicity, quite apart from culture, is simple body size: Samoan and Hawaiian males average about 1.3 times as heavy as males of Japanese or Chinese descent (Hawaii Department of Health Yearbook, 1984). It is obvious that, other things being relatively equal, size is positively related to the chance of winning and thus of being reinforced for fighting. It would take very specific contrary factors to neutralize the effects of this mechanism.

And, people do seek such "neutralizing" factors: in surveys at a Com-

munity College in Hawaii, one of the authors of this article found that young men who have had martial arts training were about twice as likely to have gotten into a fight within the past year as those who had not (Blanchard, unpublished data). This suggests that martial arts training is largely undertaken in order to increase one's chances of success in fighting, and those who have had such training are less inhibited by fear of defeat. Interviews with students from the same community college also indicate that especially aggressive individuals often carry weapons on their persons or in cars. When questioned, such weapon-carrying males often admit that they themselves start (with provocation alleged, to be sure!) most of the fights they engage in and that the weapons are carried primarily for the purpose of enhancing the effectiveness of assault rather than as protection against expected assaults. All of these phenomena are concordant with the view that expectation of victim retaliation is an important factor in "decisions" relative to aggression.

But it is not only the immediate victim and his allies who can retaliate. Overly aggressive individuals can often encounter long-term consequences of their antisocial acts. A consistent theme of research on highly violent individuals is that these persons, most often younger men, tend to be poor, comparatively ill educated, unemployed or employed in relatively low-status jobs, and without significant prospects of enhanced social and employment opportunities (Curtis, 1974). There are probably a number of mechanisms underlying the linkage of this syndrome with violence, such as inadequate care during childhood, higher levels of resentment and frustration, and deficiencies in important social skills such as the ability to negotiate. What tends to be overlooked in this relationship is the relative lack of significant negative consequences for aggression in such persons relative to those whose expectations are brighter. The satisfactions and rewards of a good job are hard to overestimate, and social "respectability" has its rewards as well: in most societies these can be quickly jeopardized by criminal violence or indeed by any significant illegal activity. People who have good prospects tend to be careful not to do anything which will upset the apple cart. Those without hope and those whose low-paying and low-status jobs are less threatened by personal acts of violence are relatively invulnerable to this threat. The individual with little to lose is thereby removed from significant sources of social control.

Blanchard and Blanchard (1983) reported the results of a survey which lends support to this interpretation. They found that male students in a community college specializing in vocational and technical education reported that they had engaged in three times as many instances of high-level violence within the family and eight times as much outside

the family as undergraduate male students at a state university in the same city. The "high-level" violence score included events in the following four categories: "kicked, bit, or hit with fist; hit with object; beat up; used knife or gun on." Women at the same community college self-reported four times as many acts of high-level violence within the family as women at the university, but not more extrafamilial violence than the very low levels reported by the university women. Thus, there were consistent differences between the two institutions for male and female violence within the family, suggesting that demographic differences between the groups favored increased violence for the community college students. However, the extrafamilial violence scores were very disparate for the two sexes. The pattern seen suggests that males in vocational-technical job slots see relatively little potential punishment for acts of extrafamily violence, while aspiring professional males (the university students), and indeed all females, are strongly inhibited in terms of extrafamily violence. In fact, the university males reported no more high-level extrafamily violence than did the females of either group.

Each of these informal sources of social punishment for violence—the reactions of one's own family, retaliation by the victim and his/her allies, and the social and employment consequences of violence—may be involved in an interesting finding by John Paddock. Paddock (1982) has analyzed villages in Mexico where rates of violence are very high, comparing these to low-violent villages. His finding that a major factor separating the two is village stability, with villages with stable populations showing less violence and those with transient populations, more, could reflect the combined actions of all of these mechanisms. People in stable villages tend to be near their families, who will certainly find out about violent or criminal acts they commit. People in stable villages have family and nonfamily allies who may perhaps be counted on to help avenge the victim of unsanctioned violence. People in stable villages must worry about their reputations because the memory of a stable village is long. While such information should necessarily be interpreted with caution, it certainly suggests that social stability can serve as the foundation for a number of informal reward-punishment mechanisms which act to control aggressive and antisocial behaviors.

V. THE CRIMINAL JUSTICE SYSTEM: PUNISHMENT FOR AGGRESSION

The criminal justice system is the final and most formal mechanism set up by society to control undesirable behavior, including aggression or

violence. The criminal justice system of the United States, and of most other industrialized countries as well, has produced an enormous mass of data and statistics, and these may be examined for clues to the relationship between criminal violence and punishment parameters. However, it is obviously part of the nature of criminal justice endeavor that experimental manipulations are difficult, and thus, experimental evidence is hard to come by. Although legislation and administrative decisions sometimes produce relatively systematic changes in important variables, research in this area is often very difficult to interpret due to the mass of extraneous variables which always seem to be involved in this complex system.

A. The "Driving While Intoxicated" Literature

Nevertheless, there are a few areas in which it may be possible to provide a reasonable assessment of the relationship between punishments given through the criminal justice system and the likelihood of specific behaviors. One such area is that of driving while intoxicated (DWI). Over the past several decades many countries have instituted programs to control DWI through increased certainty, severity, and celerity of punishment for this offense. Ross (1984) has described these results in detail and provided a summary of the deterrent effects of punishment in this area. His major conclusion is that "changes in the law promising increased certainty or combined certainty and severity of punishment reduce the amount of drinking and driving." Ross's survey did not support a view that increases in severity of punishment alone were effective in reducing DWI, while the influence of increased celerity of punishment could not be adequately evaluated because it never changed except in conjunction with other major enforcement program alterations. What this suggests, then, is that, at least for the one illegal activity of DWI, it is the certainty of punishment which is most effective in controlling behavior.

This control appears to be a function of the public's knowledge of the new, stricter program, and such reductions tend to disappear over months or years, presumably as the public learns that the probability of punishment is still not that high. In the very strictest countries with regard to DWI, such as Sweden, the chances of apprehension for a legally drunk driver have been estimated at about 1 in 200 (Ross, 1984).

While this last finding suggests a certain degree of pessimism with regard to the permanent reduction of DWI through enhanced enforcement alone, these data are nevertheless strongly supportive of the view that behavior can be controlled by the expectation of punishment. Driv-

ing while intoxicated is apparently an offense which is quite difficult to detect (short of stopping and testing all drivers), and increases in the still very low rate of apprehension could be achieved only at enormous additional expense and inconvenience to both the police and the public. What this suggests is that, for illegal activities where increases to more reasonable levels of apprehension are possible, punishment may provide an excellent means of social control.

B. Punishment for Violent Offenses by the Criminal Justice System

Before attempting to investigate the disposition of violent offenses within the criminal justice system, it is necessary to obtain some idea of the complex options available in this system. Ebbesen and Konecni (1982) present an overview of major decision-making stages in the criminal justice system, along with data on the flow of cases from one point to another, for three data sets. These charts indicate, first, that the flow from crimes or offenses committed to arrest is very uncertain, with about 70% of crimes committed resulting in no arrest. This figure is important, because the two detailed flowcharts presented by Ebbesen and Konecni (1982) for over 145,500 felony arrests in California in 1977 and for San Diego County (24,000 adult felony arrests for 1976 and 1977), both start with arrest. The outcomes presented in these charts must therefore be modified in light of the attrition between crimes committed and arrests, which is not given for either of these samples.

The Ebbesen and Konecni figures suggest that between 15 and 20% of felony arrests lead to felony conviction. It is notable that about 80% of convictions result from guilty pleas, and the vast majority of these are based on plea bargains. Thus, the 15–20% figure represents conviction for *some* felony after felony arrest, not conviction for the specific felony for which the arrest was made. Since a bargain was struck, it seems reasonable to suppose that the guilty plea was entered for a lesser felony than that charged. An additional proportion (which is indeterminate in terms of the flowcharts presented) of felony arrests result in conviction for misdemeanors.

It is, of course, somewhat less than satisfying to combine figures from different sources to estimate the overall progress from crime to conviction, but the large data sets presented by Ebbesen and Konecni (1982) do suggest a figure in the vicinity of 5% for felonies. Carroll (1982) suggests a 5 to 10% figure for the proportion of property offenses leading to conviction, which provides some additional support for this value.

Data on crimes of violence suggest that these, with the possible excep-

tion of homicide, result in overall conviction rates which are very similar to those for nonviolent crimes. The Sourcebook of Criminal Justice Statistics presents several tables containing information on the reporting of violent crimes (Table 3.1), and clearance of reported crimes by arrest (Table 4.16) and conviction rates (Table 5.22) which all suggest similarity in progress along these steps for violent and nonviolent crimes. Specifically, about 50% of violent crimes are reported, about 43% of these result in arrest and, of those tried for violent crimes, about 70% are convicted. What these tables do not reflect is the attrition from arrest to trial, which is considerable for all crimes combined (Konecni & Ebbesen, 1982). Unless this step is radically different for violent as opposed to nonviolent crimes, an assumption which seems to be unwarranted in terms of the similarities existing at other steps, attrition here should produce an overall outcome of 5 to 10% conviction for crimes of violence. Although this process of combination of data from somewhat different sources is again hardly satisfactory, it would have to be argued that the resulting figures are grossly defective indeed in order to obviate the conclusion that the criminal justice system of the United States provides a very uncertain threat of significant punishment for most violent crimes.

Independent estimates of the outcomes of criminal justice treatments of one of these offenses, rape, yields very similar results (Rose & Randal, 1978). A recent paper on adolescent sex offenses, including rape, suggests that this low rate of consequence is not limited to adult offenses (Knopp, 1983).

C. Covariation in Crime and Punishment Rates

While this apparently low baseline of consequence for violent crime suggests that improvement in the probabilities of arrest, prosecution, and conviction might have some impact on crime rates, it is difficult to obtain data which are directly relevant to such a relationship. One indirect method, rather unsatisfactory in and of itself, is to note that factors which are associated with variation in the probability that violent crimes will result in conviction are often associated with variation in the overall rate of violent crime. On a within-country basis, urbanization is strikingly related to rates of violent crime: both the overall rate of violent offenses (Sourcebook of Criminal Justice Statistics, 1984, Table 3.7) and the rate of reported violent crimes (Table 3.58) are much higher in cities and inner-city areas than in suburbs or rural areas. Increased urbanization is also associated with a durable tendency toward lower rates of convictions for violent crime (Table 4.16).

Another basis for assessing the dynamics of the relationship between

crime and punishment is to examine crime and crime clearance rates in other countries. Japan is a country in which crime, especially violent crime, is not only low, but has also—anomalously—tended to decrease rather than increase over the last 20 years (White Papers of Japan, 1984). Murder, rape, and especially robbery rates in Japan are only a fraction of those in the United States or most Western European countries. And, violent crime in Japan results in very high rates of arrest and conviction. In 1980, the clearance rate for murder was 97%, and battery, bodily injury, and manslaughter had rates of over 90%. For rape and robbery, clearance rates were over 80% (Kodansha, 1983). Prosecution of those arrested was also high, though variable by crime category. Thus, of arrestees, 56% of rape suspects were prosecuted, as were 77% of those arrested for bodily injury and 75% of arrestees for robbery during the 3-year period 1980–1982 (Japan Statistical Yearbook, 1985). Homicide constituted an apparent exception to this trend, with only 39% of cleared cases resulting in prosecution, a pattern which may in part represent much higher proportions of murder/suicide (compared to murder without suicide) in Japan as compared to the United States. Additionally, it has been estimated that the rate of unreported violent crime in Japan is “extremely small” except for the category of rape (Kodansha, 1984).

In the absence of the statistics on conviction, these figures are somewhat less than satisfactory. However, they do suggest that attrition from offense, to reporting, to arrest, to prosecution for violent crime in Japan is much less than in the United States, which strongly suggests that the potential perpetrator of violent acts in that country probably has a higher expectation of apprehension and prosecution. Another relative anomaly of the Japanese criminal justice system—that approximately 98% of locked-up offenders are sentenced to “hard labor” (Martinson, 1974)—doubtless adds somewhat to the expectations of potential perpetrators in that society.

It is obvious that the foregoing survey of some aspects of criminal justice system data relevant to the punishment issue, while supportive of the view here espoused, does not provide direct evidence on this issue. The complexity of additional variables and relationships embedded in comparisons of crime rates in Japan and the United States, or, among urban, suburban, and rural areas within the United States, necessitates cautious interpretation of any apparent correlations emerging from these data. However, these criminal justice statistics add to the finding (Erickson, Gibbs, & Jensen, 1977) that individuals’ perceptions of the seriousness of a specific crime, and the probability of punishment for it, are inversely related with their reports of having committed that crime. All these are certainly congruent with a view that the perceived

likelihood of punishment is one of the factors associated with differences in rates of violent crime.

D. The Case of Family Violence: Some Direct, Experimental Evidence

An additional phenomenon, one which has received much attention in recent years, involves differential reactivity to violence by the criminal justice system, based on the relationship of perpetrator and victim. Black (1980), on the basis of an examination of thousands of police cases, noted that the relationship between the parties involved was as important as the seriousness of the offense in determining police responsiveness. In this research, police were more likely to give official recognition to a misdemeanor involving strangers (74%) than to a felony involving intimates (62%). This finding held true almost regardless of the amount of violence in the setting. Thus, despite the fact that according to Black's (1980) finding, "disputes between the most intimate people—married couples—are especially likely to involve violence or the threat of violence," police officers tended to use a more "conciliatory" (less legalistic and coercive) style than in conflicts between less intimate individuals. While 60% of disputes involving married couples involved either violence or the threat of violence, in 72% of the marital cases the police utilized a nonlegalistic response. Black also noted that police officers intentionally dallied en route to "family trouble" calls, hoping the conflict would be resolved before they arrived.

This phenomenon has been repeatedly confirmed in other research. Surveys of battered women who reported a desire to have their assailants arrested reported that arrest occurred in only 10% of cases (Roy, 1977) or 3% (Langley & Levy, 1977). In addition, surveys of police agencies in several states found explicit policies against arrest in domestic cases in a majority of police departments (Sherman & Berk, 1984). Sherman and Berk (1984) cite literature which suggests that, while violence is present in between one- and two-thirds of all domestic disturbances, police statistics reflect arrests in only between 5 and 6% of these cases. When it is considered that the identity of the perpetrator is known in almost all of these cases (in contrast to assaults involving strangers), this figure becomes even more indicative of differential police treatment on the basis of family relationship of those involved.

In terms of the present thesis, this low probability of punitive response should be a factor contributing to the likelihood of such husband-wife violence. And, this likelihood is undoubtedly high: about 25 to 30% of murders involve family members, a figure which does not

include unmarried lovers (Curtis, 1974). Moreover, there is evidence that low-level domestic assault cases do progress to more serious violence. A study by the Police Foundation (1976) found that in 85% of a sample of spouse killings, police had intervened at least once in the preceding 2 years; for 54% of the cases, police had intervened five or more times.

Finally, there is experimental evidence that increased punitive police responsiveness to family disputes reduces the probability of future violence. Sherman and Berk (1984) report results of a program involving three modes of response by police in Minneapolis to cases of domestic violence: attempting to counsel both parties, sending assailants away for several hours, and arrest. Arrest was the most effective of the three methods, with only 10% of women whose assailants were arrested reporting additional violence within the next 6 months, in contrast to 19% whose assailants were advised and 24% whose assailants were sent away.

Thus, while much of the data linking crime and punishment rates requires caution in interpretation, some aspects of it do involve experimental evidence (Sherman & Berk, 1984) or something fairly close (i.e., DWI rates after alterations of enforcement probabilities). Moreover, the apparent stability of the relationship between crime rates and likelihood of punishment, in a wide variety of situations, suggests that, while each aspect of this correlational evidence should be taken with caution, the entire body of correlational data provides some considerable basis for support of the more direct evidence which is available.

E. The Expectation of Punishment

Punishment can only have a deterrent effect, either for the punishee or for others, if it results in expectation of similar negative consequences for future aggressive acts. Insofar as expectations are different from actual probabilities of punishment, it is the former rather than the latter which are more important (Erikson & Gibbs, 1978). Some flavor of this may be seen in the DWI literature, where it is suggested that stronger enforcement programs reduce DWI because people overestimate their likelihood of being arrested, with this effect to some degree "wearing off" after the enforcement program has been in effect for a while (Ross, 1984). It is interesting in this light to note that most of the (American) subjects in one survey grossly overestimated the probability of punishment for reported crimes (Empey, 1982), and it may be this overestimation which provides much of the effectiveness of the legal sanctions now available in the United States. Certainly this factor goes far to resolve the

paradox that "if a knowledge of penalties is an essential ingredient for deterrence, then how is it that criminals have the most knowledge and are seemingly the least deterred?" (ACCP, 1968:15; cited in Empey, 1982). Although criminals do indeed have the most knowledge about the officially designated penalties for crimes, in contrast to noncriminals they also know that most crimes do not result in any punishment from the criminal justice system. A number of studies (Claster, 1967; Jensen, 1969; Waldo & Chiricos, 1972) have reported an inverse relationship between the subjects' general history of personal offenses and estimates of the likelihood of arrest and conviction, for both juveniles and adults.

Carroll (1978) has attempted to investigate the decision-making process for crimes of gain, using different parameters of amount of gain, likelihood of success, likelihood of punishment, and magnitude of punishment. While such models have been criticized on a number of grounds (Konecni and Ebbeson, 1982), including the discrepancies between the ranges of values used for each dimension and those obtained in actual crimes of gain (Carroll, 1982), this specific study does contain one point of special interest: while the dimension of certainty of punishment was less influential than the dimension of amount of gain (which was very important), "gain" from aggression is largely dependent on successful completion of the aggressive act. Thus, limiting the success of aggression in obtaining either intrinsic or extrinsic rewards constitutes an effective strategy in controlling the development of aggressive tendencies. In this context, Carroll's findings are precisely congruent with the suggestion that punishment strategies coming early in an aggressive sequence should be especially effective. Another notable feature of the Carroll study, which may have been in part responsible for the comparatively low effects seen from punishment certainty, is that the "punishment" dimension involved only anticipated punishments from the criminal justice system. While the criminal justice system may be the major, and perhaps sometimes the sole, source of expected punishment for crimes of gain, this is definitely not the case with aggressive behaviors, even those which come officially within the purview of the law.

F. The Criminal Justice System and Informal Social Sanctions for Aggression

While it receives a disproportionate share of public interest and debate, the criminal justice system might well be regarded as merely the last of many control mechanisms regulating violent behaviors through manipulation of consequences. There are a number of reasons for placing informal social mechanisms in the foreground with reference to

aggression. First, they are the only system operative to any degree with children. There seems to be no question that aggressiveness is a long-term characteristic of individuals, beginning, at least in part, with childhood attributes and experiences (Olweus, 1984). Thus, consequence for aggression in children, which normally is based on only informal social mechanisms, may have a lifelong impact on the aggressiveness of individuals.

Comprehensiveness of consequence is another important factor differentiating informal social mechanisms from the formal criminal justice system. Even in this age of greatly expanded litigiousness, no social critic really expects that all undesirable aspects of a person's behavior should come within the purview of the legal system, and certainly not the criminal justice system. There are many, many aspects of anger and aggressiveness for which there is no almost no way to provide legal redress. The criminal justice system, dealing only with extreme cases, should have much less impact on "noncriminal" aggression. However, a history of success in such "noncriminal" aggression might be expected to provide tendencies toward aggressive or violent behavior which might constitute a source for future violent offenses, even if formal punishment of offenders was totally effective in eliminating recidivism (Hackler, 1984).

The informal social mechanisms through which violence can be punished are usually swifter than any formal criminal justice system can be. The immediacy is obvious: in a violent offense, one's opponent is almost always there on the spot; family and allies on both sides are often available within minutes or hours to offer opinions, emotional reactions, and other rewards or punishments. The employment and reputational consequences of overt aggression are often very rapidly experienced as well. This particular point is easily oversimplified, however. Although there is a vast amount of work (see summaries in Campbell & Church, 1969; MacKintosh, 1974) detailing the effects of immediate versus delayed rewards and punishments in laboratory animal research, the criminal justice system deals almost exclusively with teenage and adult humans. Such subjects can doubtless tolerate delay in punishment much better than animals or young children, and this may be a factor in the lack of a robust effect of increased celerity in such areas as DWI (Ross, 1984). On the other hand, the limiting case of celerity of punishment is when the act is punished before it has been finished. And in such cases, where early components of a sequence are punished and later components are interrupted, punishment appears to be particularly effective (Campbell & Church, 1969).

Moreover, there are reasons to believe that involvement with the

criminal justice system may interact in complex ways with informal social sanctions to produce very different effective punishments for different people. At one extreme, the career criminal may be much more concerned about conviction than about apprehension (Letkeman, 1973): apprehension or arrest alone no longer produces significant problems in the life of such a person. It may be surmised that in most cases the effective deterrence from informal social sanctions is minimal for such persons also. As a contrast, it might be noted that the wife-abusers arrested in the Sherman and Berk study (1984) did not receive harsh legal penalties as the result of their arrest. Apparently the embarrassment and apprehension associated with being arrested was sufficient to serve as a deterrent for this group of otherwise largely law-abiding citizens. In fact, to the extent that harsh penalties within the criminal justice system disrupt the lives of ordinary people, they may have the effect of producing more antisocial behaviors rather than reducing the level of antisocial acts (Salzberg & Paulsruide, 1984).

What these considerations clearly suggest is that, while the deterrent capabilities of the criminal justice system cannot be neglected (and indeed deserve attention and analysis on an ongoing basis), equal consideration is due of the dynamics of the informal social mechanisms which, when functioning properly, can regulate social behaviors so that they rarely require attention from the law. Some of this informal social control system works through mechanisms which have little to do with punishment. However, those components which are punishment based are an indivisible portion of the whole, part of a dynamic system which cannot function well when these specific components are singled out for disapproval and neglect.

VI. BIOLOGICAL MECHANISMS IN PUNISHMENT: AFFECTIVE AND NONAFFECTIVE CONSEQUATION MODES

Much of the thrust of the present treatment has been directed toward a demonstration that contingent aversive consequences are capable of substantially reducing aggressive behavior. But, punishment and aggression are each complex phenomena, and they interact in complex ways. It is unconscionable to deny that punishment can be easily misused or that this misuse can have many and profound ill effects. How, then, to separate the beneficial aggression-control aspects of punishment from those that are harmful to people and institutions? While it should be evident that a satisfactory answer to this question is not yet

available, some considerations from biological research might nevertheless be useful in structuring an analysis of the issues involved.

A. Affective Consequence in Lower Mammals . . .

From an evolutionary viewpoint, conspecific aggression and conspecific "punishment" are virtually the same thing. The vast majority of instances of one subhuman animal "punishing" a conspecific involve nothing more than the first animal threatening or attacking the second. Across the general range of mammals there is little equivalent to the dispassionate communication of disapproval or the "time outs" and denial of privileges which constitute a considerable portion of nonphysical punishments in people. Taking away of resources does, of course, occur, but this is usually in the context of threat or attack as well.

Another important feature of punishment in subhuman animals is that, from the perspective of the giver, "punishment"—attack—is primarily a reflection of an emotional state. This state, analogous to anger (Blanchard & Blanchard, 1984a), appears, at least in rodents, to involve the specific goal (as measured by reinforcing consequences) of attacking, harming, and defeating an opponent (Scott & Fredericson, 1951; Lager-spetz, 1969; Blanchard & Blanchard, 1984a). Specific behavior changes in the opponent, such as leaving the aggressive animal's territory or giving up a disputed resource, may also be reinforcing to an attacking rodent. However, these reinforcing behaviors are quite restricted—cessation of challenge related to status or resources and, perhaps, behavioral indices of pain, distress, or submissiveness related to the impact of the attack itself.

A strange male intruder placed into another male's colony or territory is likely to be attacked by the resident, not so much because of what it is specifically *doing* as simply where it *is*; anesthetized males are attacked just as quickly (Blanchard, Blanchard, Takahashi, & Kelley, 1977). Similarly, subordinate colony males are intermittently attacked throughout their lifespan, but generally not, at least so far as we can tell after examining several thousand hours of videotapes of such groups, on the basis of what they are doing at the moment (Blanchard, Flannelly, & Blanchard, 1986). Disputes over food, receptive females, water, and other potentially limited resources do somewhat increase the chance of one animal attacking another, but it is rather surprising how little impact these resources have, at least under the relatively luxurious housing conditions afforded to laboratory animals (Blanchard, Fukunaga-Stinson, Takahashi, Flannelly, & Blanchard, 1984b). What does elicit attack is the challenge to defensible status or resources implied by a conjunc-

tion of factors: The eliciting animal's characteristics (familiarity, age, sex), its location with reference to the attacker's territory or resources, and/or specific relevant behaviors. Attack is thus elicited by a complex situation involving challenges that are more implicit than explicit (i.e., based on specific challenging actions). Similarly, the goals of such attack are complex and perhaps difficult to fully achieve: to reduce the challenge through damage to or subordination of the challenger, or at least to end any specific behavioral challenge.

B. . . . and Some Human Parallels

There are a number of important parallels between the punishment-attack pattern in lower animals and affective consequence in people. Averill, in his (1982) examination of reported motives of angry people, found the most significant of these included the assertion of authority (dominance), revenge (harm to the person causing the anger), and, finally, an attempt to bring about behavioral changes in the instigating individual. The detailed similarity between the complex mixture of goals associated with anger in people and the motives for aggression in lower animals strongly contradicts a view that the angry desire to dominate or harm another person or to control that person's behavior is abnormal or based on pathological life experience. Instead, both these goals and the mechanism by which they are often realized—*affective display, followed by verbal and physical aggression toward the anger instigator*—are biologically based components of anger. This system serves to *consequence* much of human behavior, as well as the behavior of subhuman animals.

A further parallel between the attack-punishment system in lower mammals and anger in people may be found in the factors which elicit both. We have elsewhere (Blanchard & Blanchard, 1984a) analyzed resource/status disputes in lower animals as the analogues of human property/rights disputes which are so often involved in human anger. What is perhaps a more relevant parallel here is that anger/attack is not simply a response elicited on the basis of a specific happening. It is a relatively diffuse system, aroused on the basis of situational factors and status and history of the subject, as well as status, age, sex, and other characteristics of the putative opponent. Each of these factors may be demonstrated in rodents (for review, see Blanchard & Blanchard, 1984a), and they correspond well to demonstrable, though incompletely conceptualized, features of human anger.

C. Affective Consequation and Punishment

These features of anger provide many problems for an effective and humane role of affective consequation in the punishment of human behavior. Anger in humans is often poorly tied to specific behaviors of the anger instigator, on either the antecedent or the consequent side. That is, anger is in part an enduring event, summing input from many factors. It is therefore seldom specifically appropriate, in terms of both quality and magnitude of response, to the actions of another, even when these actions are designated by an attribution process as the "cause" of the anger. An additional problem is that, in people as well as in lower animals, the goal-reinforcements for anger and attack are often as much involved with harm to the object of the attack as with changes in this individual's behavior. Put somewhat differently, anger as a neurobiological system tends to follow a retributive rather than a deterrence model of punishment. Affective consequation is therefore less likely to be effective, since it occurs with little regard to behavior change on the part of the other, and it is certainly less likely to be humane, since its goals are essentially selfish and punitive.

This view of a continuity between the attack-punishment system in lower mammals and affective consequation in people thus provides a framework for conceptualizing some of the real problems of punishment in human affairs, insofar as this punishment is based on the affective consequation mode. However, if indeed biology is destiny, one must at least consider the entire relevant biological system rather than just a part of it.

D. A Nonaffective Consequencing System

While it is generally true that conspecific negative consequation in most submammals equates to threat or attack, there is a trend toward consequation that is both more specific and more dispassionate in at least one area of life and at least among some higher mammals. This may be seen in the parental "training" of young which increases notably in higher primates and perhaps elephants and a few other higher species. This trend has many components and probably diverse functions as well, although it has sometimes been conceptualized as an entity (cf. "social" or "cultural" learning). Although some aspects of this shift may be seen in birds, it is within mammals that the most profound movement toward learning mediated through or enabled by parents occurs (for a review see Bonner, 1980).

Several different parenting behaviors are involved. One crucial element is a greatly increased duration of parenting in higher mammals,

providing care and protection which frees the offspring to imitate adults, practice skills, and learn important features of the social and physical environment in the context of "play" (Bekoff & Byers, 1981; Smith, 1984). Additionally, adults of higher mammalian species may provide explicit models for imitation and observation learning in contexts in which it is clear that these actions have no functional value to the adult aside from their effect on the young. Finally, a necessary component of parental "teaching" is the provision of relatively emotionless positive and negative consequence of the actions of the offspring.

This set of parental (or other adult) behaviors directed toward young and juveniles makes possible the more or less direct transmission of an immense amount of information. While the behavior change associated with this process may actually be less rapid than that based on affective negative consequence (for a specific comparison of the two in one situation see Mast, Blanchard, & Blanchard, 1982), it is a great deal more precise. Fear learning tends to abruptly suppress all potentially competing behaviors by eliciting a set of prepotent defensive reactions. This can occur in the absence of any specific connection between a particular behavior and punishment. In contrast, the types of learning transmitted through the various modes of "social" learning, including nonaffective negative consequence as an important component, do involve specificity. By promoting the learning of new behavior patterns, social learning also provides alternatives (other than defensiveness) to a punished response.

This trend toward longer parental care and more training of a wider range of behaviors of the young is obviously a prominent feature—one might almost say a defining characteristic—of human behavior (Barnett, 1973). Relatively dispassionate consequencing, both negative and positive, is a common and essential feature of human education and teaching behaviors. In contrast to affective consequence, this pattern is specifically directed toward the learner's behavior, with deficiencies in this behavior serving as the cause and improvements in this behavior the goal of a "teaching" form of consequencing. Even when conscientiously carried out, this process does not guarantee perfect behavior: a "teacher" who misidentifies the actions to be consequted, perhaps through a warped or ignorant attribution process, or whose own knowledge or goals are flawed, can cause a great deal of harm. It will usually be relatively specific harm, however, because the process promotes specificity rather than the elicitation of global emotions.

On the other hand, affective negative consequence, at least insofar as it involves attack or serious threat of attack, tends to promote rapid obedience. It is thus easy to see that both forms of negative consequen-

tion, affective and nonaffective, may be appropriate and functional, depending on the specific situation. And, indeed, some mixture of these modes is typical for many social learning situations. For the consequence of aggression, the problem, perhaps, is that while some incorrect behaviors in need of negative consequence are relatively neutral in their emotion-eliciting capacity, this behavior is not. Aggressive behaviors by their nature involve threats to authority, the possibility of harm or damage to people and property, verbal insults, and the like. While these reactions might well respond to systematic and rational consequence, and indeed the data presented in earlier portions of this paper suggest that they do so, what they typically elicit from other people is a sort of generalized anger or hostility in which the goals of the consequence person become the typical goals of anger—harm to the anger-eliciting person and dominance over him, not a simple switch from the original instigating behavior to some other mode.

E. The Punishment of Aggression

In the control of aggression, the use of punishment may thus be seen as reflecting two independent systems. One of these, the affective consequence system, is very primitive, while the other, more rational system is in evolutionary terms just emerging. Unfortunately the latter, along with parental behavior in higher primates generally (Capitano, Weissberg, & Reite, 1985), appears to be more dependent on the adequacy of individual experience than is the anger/attack system.

Recognition of the biological legitimacy of both of these opposing trends does not constitute a justification for the use of poorly contingent anger/threat/attack/revenge as a means of social control. Instead, a biological view of anger provides a warning of the power of this system in normal people. It suggests that the tendency to punish affectively and in a relatively noncontingent fashion is no social artifact, particularly where the behavior to be punished is one which elicits significant emotion. Thus, if we are committed to more rational means of consequence behavior, it should be faced that this endeavor runs, at least in part, against the grain of a firmly entrenched emotional/behavioral system, which is, moreover, extremely unlikely to disappear entirely, regardless of what we do with society.

What we are suggesting, then, is that there is a foundation in evolutionary biology for both good and bad forms of punishment and that ways must be found (note suggestions by analysts such as Walters & Grusec, 1977) to promote the first and reduce the second. However, more is needed than suggestions. The study of punishment as a factor

controlling aggression and other behavior problems now stands at the level of important questions and inadequate answers. It is clear that some researchers (cf. Konecni & Ebbesen, 1982) are beginning to address crucial methodological issues involved in the construction of models which will provide better answers to these and related questions, while others (cf. Forehand *et al.*, 1983; Sherman & Berk, 1984) are showing increasing willingness to pursue their questions back into the real world. These efforts are promising, as much for the attitudes they suggest as for the results already achieved.

These and other recent trends provide reasons for optimism regarding the future of punishment research. And, it is just this—research—that we are advocating, not some sweeping social change. As scientists and as people who believe in science, we do advocate scientific research as an important basis for public policy. But the research must be adequate to the importance of its use, and for issues of the magnitude of those involved in the relationship of punishment and aggression, what is needed is a far more specific and powerful body of research than anything now available.

It might be well also to insert a note of urgency here. Since punishment is often clearly and immediately effective and affective consequence is often reinforcing to the angry person even when it is not effective, people and institutions doubtless will continue to use many variants of the punishment mode: people who do not have a better method to solve a problem use what method they have. And in lieu of techniques for refining the method, they often simply escalate in magnitude. If research is to have any input into this system, it seems much preferable to provide information which can be used to make punishment work effectively and humanely rather than deploring its use altogether.

Finally, there are those (ourselves to some degree included) who believe that the biological urges involved in anger and aggressiveness are related to human conceptions of rights and justice; thus, these urges should be tolerated because they occasionally serve as a valuable protection against unjust limitations on individual rights. However, there are many instances in which aggression has very little to do with a socially responsible and consistent view of one's own rights vis-à-vis those of others. We are comfortable with the view that such aggression should be controlled. This is both for the sake of the victim and also for that of the overly aggressive person himself or herself, whose life is often a chronicle of wasted opportunities and wrecked relationships. Insofar as punishment techniques are effective in the control of aggression, their inherent problems must be balanced against these benefits to victims, to the

perpetrators of aggressive acts, and to the societies which encompass both.

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Mitigating the Influence of Violence on Television and Sexual Violence in the Media

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I. INTRODUCTION

The concern over the potential effects of media violence on both children and adults is not new. The research literature abounds with studies demonstrating effects on behavior, attitudes, and perceptions. While there are disagreements regarding the relative contribution of mass media violence to actual aggressive behavior (e.g., Freedman, 1984), the research community is fairly unanimous in its conclusion that at least some individuals are affected and that exposure to many types of violent media can contribute in some part to the overall incidence of violence in our society. While the last two decades were devoted to research on the impact of mass media violence, there is now some emphasis on methods of countering or mitigating the impact of exposure. This research has by no means reached the point where we can say with certainty that a given message, educational program, or label on a particular media product is effective in reducing the impact of exposure to violence. We are, however, able to identify some promising procedures developed indepen-

dently by several researchers that may counter the effects of exposure to media violence. The intent of this article is to review these attempts at mitigating the effects of exposure to televised violence, violent pornography, and mass-released (R-rated) violent media presentations.

II. THE EFFECTS OF EXPOSURE TO VIOLENCE IN THE MEDIA

A. Violence on Television

Congress had been concerned about violence on television as far back as 1954, when Senator Estes Kefauver, the Chairperson of the Senate Subcommittee on Juvenile Delinquency, questioned the need for violent content in much television entertainment (Liebert, Sprafkin, & Davidson, 1982). As a result of this concern, a large amount of money became available for research on media violence in the 1960s (Sears, Freedman, & Peplau, 1985). In 1972 the results of these investigations were summarized in a report by the Surgeon General of the United States Public Health Service. The report (Surgeon General's Scientific Advisory Committee, 1972) concluded that there was

. . . a preliminary and tentative indication of a causal relation between viewing violence on television and aggressive behavior; an indication that any such causal relation operates only on some children (who are predisposed to aggression); and an indication that it operates only in some environmental contexts. [p. 11]

The findings of this committee immediately came under attack. It was assumed that because some of the members of the committee were representatives of the television networks that the report could not be the product of disinterested scientific observation. The political debate on the effects of television violence continued through the 1970s. In early 1980 the Surgeon General again called upon the behavioral science community to evaluate the research on television violence and aggressive behavior. This time a much stronger statement on the impact of television violence on violent behavior was made. The new report issued by the National Institute of Mental Health (1982) first concluded that in the years since the first report there had been no reduction in the amount of violence on television. Second, the report concluded:

The consensus among most of the research community is that violence on television does lead to aggressive behavior by children and teenagers who watch the programs. This conclusion is based on laboratory experiments and on field studies. Not all children become aggressive, of course, but the correlations between violence

and aggression are positive. In magnitude, television violence is as strongly correlated with aggressive behavior as any other behavioral variable that has been measured. The research question has moved from whether or not there is an effect to seeking explanations for the effect. [p. 6]

As Huesmann, Eron, Klein, Brice, and Fischer (1983) note, several processes have been suggested to explain the positive relationship between viewing violence and aggressive behavior. In general, these explanations have focused on (1) viewers learning by observing aggressive models, (2) cognitive activation of aggressive ideas and response tendencies, and (3) lowered emotional responsivity or lessened sensitivity to the consequences of violence through prolonged viewing.

Several researchers have suggested that viewers learn the message implicit in many media depictions of violence indicating that violent behavior is sometimes permissible, deridable, and profitable. According to Bandura (1983) there are numerous opportunities in everyday life to observe the actions of others and the circumstances under which they are rewarded, ignored, or punished. In general, research has demonstrated that seeing aggression rewarded in others increases the tendency to behave in similar ways, and seeing it punished decreases such tendencies (Bandura, 1965; Bandura, Ross, & Ross, 1963).

A number of investigations have been aimed at refining these original findings. Several studies have shown that younger-aged viewers are most susceptible to imitation of violent media (Eron, Huesmann, Lefkowitz, & Walder, 1972; Collins, 1973), although there may also be a tendency for adolescent viewers to also be prone to imitation (Hearold, 1979). Viewer identification with aggressive models and viewer admiration or liking for aggressive models have also been investigated, but results from these studies have not been clear cut. Some studies have indicated, for example, that both boys and girls are more likely to imitate male rather than female models (Bandura *et al.*, 1963; Huesmann *et al.*, 1978), both black and white children may be more likely to imitate white models (Neely, Heckel, & Leitchman, 1973), and under some conditions, children may be more likely to imitate adults rather than peers (Hicks, 1965; Nicholas, McCarter, & Heckel, 1971). These results have led researchers (e.g., Huesmann, 1982) to speculate that, rather than imitating a model with whom the child identifies, children are probably most likely to imitate models who possess valued characteristics.

In addition to learning that aggression may be profitable through observation of a model, a number of experiments suggest that inhibitions about engaging in aggressive behavior can be reduced if the media event contains the message that aggression is morally justified or per-

missible in certain situations (Berkowitz & Geen, 1967; Berkowitz & Rawlings, 1963).

More recently, media violence investigators have embraced theorizing in the field of cognitive psychology as a basis for understanding media violence effects. These approaches emphasize the "cue" value of violent media in helping viewers retrieve other related thoughts or invoke certain problem-solving strategies. An early formulation of the notion that aggressive cues contained in media violence will lead to later violent behavior can be found in early investigations by Berkowitz and his colleagues. Berkowitz (1974) argued that the presence of aggressive cues (stimuli that are associated with prior occasions in which aggression had been rewarded or perhaps with aggression in general) enhances the likelihood of open aggression. The amount or strength of the aggressive response or behavior made to such stimuli depends upon two factors: the cue value of the aggression stimulus and the subject's "readiness" to engage in aggressive behavior (the latter might include angering the subject by frustrating him or her in some way) (e.g., Berkowitz, 1965; Berkowitz & Geen, 1966; Berkowitz & Knurek, 1969).

More recently, Berkowitz (1984) has advanced the idea that most anti-social effects observed after brief exposure to media violence can be explained by a somewhat different association process than the one postulated above. It is not necessary here to go into detail concerning the cognitive-neoassociationistic theorizing (Anderson & Bower, 1973) underlying his recent formulations. It is sufficient to point out that Berkowitz maintains that ideas temporarily activated by witnessed or reported violent events "prime" other semantically related thoughts in the viewer which might influence interpretation of ambiguous events, heighten estimates of the frequency of aggressive acts in society, serve to justify conduct similar to that portrayed in the violent communication, or lead viewers to think of other situations where aggression has been rewarding. Carver, Ganellen, Froming, and Chambers (1983), for example, have demonstrated that people who had watched a brief film depicting a hostile interaction between a businessman and his secretary were more likely to perceive hostility in another ambiguous stimulus person. A second study by Carver *et al.* (1983) demonstrated that subjects who have been primed to have aggressive thoughts administered the most intense electric shocks to a confederate whenever that person made a mistake.

In this same vein, several authors (Huesmann, 1982; Huesmann *et al.*, 1983; Turner & Layton, 1976; Turner & Fenn, 1979) have proposed that ideas about the profitability, efficacy, and permissibility of aggressive responses (aggressive problem-solving strategies) might be encoded as a

child views a violent portrayal. According to Huesmann *et al.* (1983), three important cognitive factors may contribute to the likelihood that a child would behave aggressively as a result of viewing violence. These include (1) the child's perception of the violence as realistic, (2) the child's identification with the perpetrator of the violence, and (3) the child's beliefs about the permissibility or society's acceptability of aggression.

There is also evidence which suggests that prolonged exposure to television violence may lower emotional (physiological) responsivity to aggression in viewers. This may make aggression appear more acceptable to the viewer and increase the likelihood of aggressive behavior. Thomas (1982), for example, demonstrated that male subjects exposed to a 15-minute aggressive film subsequently delivered more electric shock to a confederate and exhibited lower average pulse rates than control subjects both before and after delivery of the shock. In another study, children exposed to a condensed version of a television detective program exhibited lowered emotional sensitivity (measured by galvanic skin response) to films of real-life aggression as compared to control subjects (Thomas, Horton, Lippencott, & Drabman, 1977). These findings are consistent with those of previous studies indicating that children exposed to an aggressive television program were less likely than those who viewed an equally exciting control film to intervene in a fight between two other children (Drabman & Thomas, 1974; Thomas & Drabman, 1975).

B. Mitigating the Effects of Television Violence

Recently there has been increased interest in teaching children skills to enable them to understand and evaluate what is being presented in the mass media, especially on television (Corder-Bolz, 1982; Anderson, 1980). These attempts at critical-viewing education have sometimes, but not often, relied on the research findings such as those cited above. The underlying premise has been, in general, that the media can teach behaviors, but the behaviors can also be unlearned (Eron, 1980). Unfortunately, although the interest in developing critical viewing skills programs within the public sector has been great, social science research on the effectiveness of these programs has been sparse. According to Corder-Bolz (1982)

Several organizations have developed educational materials, family guides, and workshop manuals to encourage selective planned viewing, to encourage awareness of differences between cartoons and realistic portrayals, commercials and programs, news and docu-dramas, and to encourage parental involvement in children's view-

ing (e.g. National PTA, Prime Time, Media Action Research Center). There, however, has been little empirical research on critical television skills. Virtually all of the efforts to develop materials for children, parents, and teachers have been based upon editorial evaluations of need. [p. 93]

Of the studies undertaken, the majority have been directed at modifying children's beliefs about television—particularly beliefs about the unrealistic nature of much of what is presented (Dorr, Graves, & Phelps, 1980; Singer, Zuckerman, & Singer, 1980; Huesmann *et al.*, 1983). Most successful of these attempts has been an intervention designed to change attitudes about aggression by Huesmann *et al.* (1983). The program developed by Huesmann and colleagues relied upon some of the major empirical developments in the area of aggression and television violence, including the notion that children learn through the observation of aggressive models that violence can sometimes be rewarding or an effective solution to problems, that increased identification with aggressors may facilitate aggressive behavior in viewers, and that viewing violence that is portrayed as socially acceptable or permissible may increase aggressive behavior. Huesmann *et al.* reasoned that even if children encoded the violent problem-solving strategies they viewed on television they might be less likely to enact these strategies if they could be convinced that they are unrealistic, inappropriate, and unrepresentative of most people's behaviors.

In their study, Huesmann *et al.* chose a sample of 169 first- and third-grade boys and girls who had a history of high exposure to television violence. The sample was randomly divided into control and experimental groups, both of which received three training sessions over a 6- to 8-week period. Before the intervention the children were pretested for the degree to which they considered the behavior of television characters as realistic. In the first study children in the experimental condition were taught, through a series of discussions and lectures, three principles: (1) the behaviors of the characters on shows such as "Starsky and Hutch" and "Charlie's Angels" do not represent the behavior of most people; (2) the camera techniques and special effects give the illusion that characters are actually performing highly aggressive and unrealistic feats; and (3) the average person uses other methods to solve his or her problems. This didactic technique resulted in little change in the children's aggressiveness, as measured through a peer nomination technique (Eron *et al.*, 1971) or as measured by frequency of violence viewing, judgments of television realism, or television character identification. Consequently, Huesmann *et al.* made a more direct attempt to motivate the children not to encode and later enact aggressive behaviors based on counterattitudinal advocacy research that has been found to be effective in producing

enduring behavioral changes in other domains (Cook & Flay, 1978). In the experimental group's training sessions, children were first credited with the attitudes that the experimenters wished them to adopt. The children were then asked to make videotapes for other children who had been "fooled" by television and "got into trouble by imitating it" even though they themselves knew better. Finally, the children composed persuasive essays explaining how television is not like real life and why it would be harmful for other children to watch too much television and imitate the violent characters. A videotape of each child reading his/her essay was then played before the entire group.

This second intervention was successful both in changing children's attitudes about television and in modifying aggressive behavior. Four months after the intervention there was a significant decline in peer-nominated aggression and attitudes about the harmfulness of television violence for the experimental group. Further, analysis revealed that the strongest predictor of decreases in aggressive behavior and attitude changes about the harmfulness of television violence occurred for subjects who had a tendency to identify less with television characters. However, the intervention did not significantly reduce violence viewing or the judgments of the realism of television violence.

C. The Effects of Exposure to Sexual Violence in the Media

By the latter part of the 1970s many persons were becoming concerned not only about violence on television, but also about what appeared to be an increase in violence in pornographic materials. Feminists warned that images of male-female relationships were becoming explicitly perverse in the widespread pornography trade. According to Morgan (1978, p. 55): "Today's [1978] pornography is in fact escalating its misogyny, promulgating rape, mutilation, and even murder as average sexual acts, depicting the 'normal' man as a sadist and the 'healthy' woman as a willing victim."

Social scientists, too, suspected an increase in aggressive pornography. Systematic content analysis of both "hard core" materials (Smith, 1976a,b) and "soft core" materials such as *Playboy* and *Penthouse* magazines (Malamuth & Spinner, 1980) helped document this trend. A great deal of previous research on nonsexual depictions of violence in the mass media would seem to suggest that depictions of violence against women, whether or not they were "pornographic" or sexually explicit, might affect attitudes toward violence and aggressive behavior (National

Institute of Mental Health, 1982). But the combination of portrayals of sex and violence may be especially potent.

Malamuth and Donnerstein (1982) have summarized the theoretical grounds for this view. First, the pairing of sex and aggression in violent pornographic depictions may classically condition viewers to become sexually aroused to violence. It is assumed by many psychologists and psychiatrists (Abel, Blanchard, & Becker, 1978) that such conditioning processes are responsible for the behaviors of sexual offenders. Aggressive acts, it is theorized, become associated with the unconditioned stimuli of sexual arousal and orgasm through masturbatory activity. Second, aggressive pornography has as its predominant theme the idea that victims secretly desire assault, often deriving sexual pleasure from it. This may cause the viewer to believe that women want to be sexually assaulted and even if they are initially resistant to sexual advances will eventually submit and even "enjoy" the aggression. Continued exposure to depictions which portray this message may affect attitudes toward sexual violence as well as behavior. Further, these depictions might have an impact on the viewer even though he realizes that they are fictional. Research on the availability heuristic has demonstrated that subjects who were asked to imagine an event that they knew was totally fictional were more likely to believe that it would actually occur than members of a control group who were not told to imagine the event (Carroll, 1978). Thus, the common myth portrayed in much violent pornography that women enjoy sexual violence may come to be believed. A large body of data indicates that it is precisely the portrayal of this myth in violent pornography that may account for many of the increases in male sexual arousal to rape depictions, male perceptions and attitudes toward rape victims, and aggressive behavior against female victims following exposure to the material.

Several studies have demonstrated that, if the victim is portrayed as becoming involuntarily sexually aroused by the assault, subjects show levels of sexual arousal as great as and sometimes greater than those stimulated by mutually consenting sex (Malamuth, Heim, & Feshbach, 1980; Malamuth & Check, 1980a,b, 1983). On the other hand, more realistic rape portrayals which depict the victim as abhorring the experience are significantly less sexually arousing than consenting portrayals (Malamuth *et al.*, 1980; Malamuth & Check, 1980a,b). Malamuth and his colleagues have made significant progress in identifying persons especially susceptible to becoming sexually aroused to violent pornography. These investigations (Check & Malamuth, 1983a, Malamuth & Check, 1980a, 1981a, 1983; Malamuth *et al.*, 1980) have yielded consistent positive relationships between self-reported likelihood of raping and sexual

arousal to rape depictions (in fact, greater sexual arousal than to consenting depictions). More recently, Barnes, Malamuth, and Check (1984a,b) have also found that individuals predisposed to psychoticism (as measured by Eysenck's P scale; Eysenck & Eysenck, 1975) experience greater sexual arousal to rape depictions than persons scoring lower on this dimension.

Additional experiments have indicated that exposure to aggressive pornography can also influence attitudes toward and perceptions of rape victims. Malamuth, Haber, and Feshbach (1980) and Malamuth and Check (1980b) found that those subjects exposed to a positive outcome rape depiction thought the victim of a different rape incident had suffered less than did other subjects who had previously seen mutually consenting or negative outcome material. Subjects who listened to a tape depicting a woman becoming sexually aroused to rape believed that a larger percentage of women in general would enjoy being raped (again compared to subjects who had been exposed to mutually consenting or rape abhorrence depictions) (Malamuth & Check, 1981b).

A number of studies have also revealed effects of exposure to aggressive pornography on aggressive behavior in the laboratory. Subjects exposed to illustrated stories from *Penthouse* magazine depicting the rape of a woman with "some suggestion" of a positive outcome who were also given a communication designed to reduce inhibitions against aggression delivered significantly more electric shocks to a female confederate. Donnerstein (1980a,b) conducted similar studies using short pornographic film clips. The results indicated that the combination of exposure to aggressive pornography, a high level of preexposure anger, and pairing with a female victim resulted in the highest level of aggressive behavior (compared to neutral or nonaggressive pornographic films). However, even nonangered male subjects exposed to violent pornography showed significantly higher levels of aggression when paired with a female victim. In another experiment, Donnerstein and Berkowitz (1981) demonstrated that exposure to aggressive-pornographic films in which the movie victims appear to enjoy being roughed up or are sexually aroused while being raped tend to increase subjects' subsequent aggression against a female even when the subjects are not angered. Exposure to aggressive-pornographic depictions with a realistic outcome in which the victim is shown to abhor the experience, however, does not appear to result in greater levels of aggressive behavior against women by nonangered subjects, although the greater aggression is still found for angered subjects.

Images of violence against women have increased not only in pornographic materials, but also in much more readily accessible mass media

materials. Scenes of rape and violence have appeared with some frequency in daytime television soap operas, in movies shown on network television, and in numerous magazine advertisements. These images are often accompanied by the theme, common in violent pornography, that women enjoy or benefit from sexual violence. For example, in the daytime drama "General Hospital," shown by the American Broadcasting Company, several episodes were devoted to a rape of one of the well-known female characters by an equally popular male character. At first the victim was humiliated; later the two characters married. A similar theme was expressed in the popular film *The Getaway* starring Steve McQueen and Ali McGraw. In this film described by Malamuth and Check (1981a):

Violence against women is carried out both by the hero and the antagonist. The hero, played by Steven McQueen, is portrayed in a very "macho" image. At one point, he slaps his wife several times causing her to cry from the pain. The wife, played by Ali McGraw, is portrayed as deserving this beating. As well, the antagonist in the movie kidnaps a woman (Sally Struthers) and her husband. He rapes the woman but the assault is portrayed in a manner such that the woman is depicted as a willing participant. She becomes the antagonist's girlfriend and they both taunt her husband until he commits suicide. The woman then willingly continues with the assailant and at one point frantically searches for him. [p. 439]

In their field experiment Malamuth and Check attempted to determine whether or not the depiction of sexual violence contained in *The Getaway* and in a mass-released film with similar content influenced the viewers' perceptions of women as well as their attitudes toward women. In their investigation, 271 male and female students participated in a study which they were led to believe focused on movie ratings. One group of subjects watched, on two different evenings, *The Getaway* and *Swept Away* (which also shows women as victims of aggression within erotic contexts). A group of control subjects watched neutral, feature-length movies. These movies were viewed in campus theaters and as part of the "Campus Film Program." The dependent measures were scales assessing the acceptance of interpersonal violence (AIV) against women, rape myth acceptance (RMA), and beliefs about adversarial sexual relations (Burt, 1980), which were embedded in a larger scale containing many items as part of a "Sexual Attitudes Survey." Subjects reported that they saw no connection between the survey and the movies. The results indicated that viewing the sexually aggressive films significantly increased male but not female acceptance of interpersonal violence and tended to increase rape myth acceptance.

In two more recent studies, Donnerstein (1983) and Donnerstein and Berkowitz (1983) attempted to assess the impact of nonpornographic

depictions of sexual violence against women on physiological arousal, attitudes toward women, and aggressive behavior in the laboratory. In the study by Donnerstein (1983), subjects were first either angered by a female or angered by a male confederate and then saw one of four types of short films. One group saw a sexually explicit aggressive-pornographic film in which a woman is attacked by a man at gunpoint, tied up, and raped (violent pornography). The second group of subjects saw the aggressive-pornographic film with the sexually explicit portions edited out (a clip that might have been suitable for cable television). In this film the woman is still attacked by a man at gunpoint, tied up, slapped around, and generally aggressed against, but there was no nudity or even simulated sexual activity. The third group of subjects saw nonviolent pornography. The fourth film was a nonsexually explicit, nonviolent neutral presentation. The results of this study revealed that for subjects angered by a female confederate, both the violent-pornographic film and violence-only film conditions produced heightened levels of aggression. The Donnerstein and Berkowitz (1983) study revealed a similar pattern of results. Angered subjects exposed to aggressive but nonpornographic materials behaved more aggressively toward a female confederate than control subjects exposed to nonviolent pornography.

More recent research (Linz, Donnerstein, & Penrod, 1984; Linz, 1985) has investigated the impact of prolonged exposure to nonpornographic materials that portray violence against women in an extremely graphic fashion (R-rated slasher films). In one study, (Linz *et al.*, 1984), men who viewed five movies depicting violence against women came to have fewer negative emotional reactions to the films, to perceive them as significantly less violent, and to consider them significantly less degrading to women. There was also a tendency for this "desensitization" to the filmed violence to "spill over" into subjects' judgments of a female victim in another context. Men who were exposed to the large doses of filmed violence against women judged the victim of a violent assault and rape to be significantly less injured and evaluate her as generally less worthy than a control group of subjects who saw no films. An additional study (Linz, 1985) examined the relationship between individual differences in psychoticism (as measured by the SCL-90; Derogatis, 1977) and responses to R-rated, mass-released movies containing sexual violence and rape on later decision making about the victim of an acquaintance rape. The results revealed several consistent interaction effects, with subjects with relatively high psychoticism who were exposed to the high sexual violence (rape) films more likely to endorse the use of force in sexual relations and to evaluate a victim portrayed in a reenacted rape case as less credible, less worthy, and less attractive.

D. Mitigating the Effects of Sexual Violence

At the end of *all* the experiments described above, subjects were debriefed. As in the case with interventions with children who are heavy viewers of television violence, these debriefings generally concentrated on the *unreality* of the media depiction. Subjects are cautioned that pornographic and nonpornographic portrayals of women desiring, enjoying, or becoming sexually aroused to forced sexual relations are fictitious. Material is also presented which attempts to dispel common rape myths (Burt, 1980), especially any myths that have been portrayed in the stimulus materials employed in the experiment (see Table I).

As Sherif (1980) has pointed out, it is extremely important for experimenters in this area to evaluate the effectiveness of these debriefings. Over the last few years several follow-up studies of the effectiveness of these debriefings have been undertaken. Donnerstein and Berkowitz (1981) compared the responses of debriefed subjects who had been exposed to violent and nonviolent pornography in their study with control subjects exposed to a neutral film who received no debriefing on seven items taken from the Rape Myth Acceptance scale and the Acceptance of Interpersonal Violence scale (Burt, 1980). Subjects in this study were followed up anywhere from 2 weeks to 4 months after participation and asked to complete the 7-item questionnaire. The results of this follow-up indicated that those subjects who viewed aggressive and nonaggressive pornography and who were debriefed showed less acceptance of rape myths than nondebriefed subjects (who had been exposed to nonaggressive pornography or neutral films).

More recently, Malamuth and Check (1984) conducted a study in which male and female subjects were exposed to sexually explicit stories depicting either rape or mutually consenting intercourse. Afterward subjects exposed to the rape version were given statements emphasizing that the depictions of rape in the stories they read were complete fantasy and that in reality rape is a terrible crime punishable by law and that victims of rape suffer severe psychological and physical damage after the assault. Subjects were also given specific examples of rape myths and assurance that these commonly held beliefs are indeed completely fictitious. Ten days later subjects received, in their classes a "Public Survey." As part of the survey subjects were asked to read newspaper articles and give their opinions, one of which was an article concerning rape. In addition, subjects were asked questions regarding the police's decision to bring charges, the victim's responsibility for her own rape, the recommended sentence for the man if convicted, and whether they thought they themselves might rape a woman if they could be assured

Table I. Rape Myth Acceptance Scale

Items
1. A woman who goes to the home or apartment of a man on their first date implies that she is willing to have sex.
2. Any female can get raped.
3. One reason that women falsely report a rape is that they frequently have a need to call attention to themselves.
4. Any healthy woman can successfully resist a rapist if she really wants to.
5. When women go around braless or wearing short skirts and tight tops, they are just asking for trouble.
6. In the majority of rapes, the victim is promiscuous or has a bad reputation.
7. If a girl engages in necking or petting and she lets things get out of hand, it is her own fault if her partner forces sex on her.
8. Women who get raped while hitchhiking get what they deserve.
9. A woman who is stuck-up and thinks she is too good to talk to guys on the street deserves to be taught a lesson.
10. Many women have an unconscious wish to be raped and may then unconsciously set up a situation in which they are likely to be attacked.
11. If a woman gets drunk at a party and has intercourse with a man she's just met there, she should be considered "fair game" to other males at the party who want to have sex with her too, whether she wants to or not.
12. What percentage of women who report a rape would you say are lying because they are angry and want to get back at the man they accuse?
13. What percentage of reported rapes would you guess were merely invented by women who discovered they were pregnant and wanted to protect their own reputation?
14. A person comes to you and claims they were raped. How likely would you be to believe her/his statement if the person were: . . . your best friend? . . . an Indian woman? . . . a neighborhood woman? . . . a young boy? . . . a black woman? . . . a white woman?

of not being caught and punished. Subjects were also asked to what extent victim, rapist, and societal factors contribute to rape. There were no effects on subjects' evaluation of the newspaper article on rape. Subjects who were exposed to the rape stories and then debriefed were, however, less inclined to see women as wanting to be raped, and evaluation of victim behavior in general as a cause of rape compared to subjects who read the consenting story and received no debriefing. Debriefed subjects were also less likely to see rape as the result of a normal sexual tendency among males.

In another experiment, Check and Malamuth (1984), using basically

the same procedures, had subjects first read rape depictions in which the victim and assailant were either acquainted or unacquainted with one another. As in the previous study, subjects were later (2 to 3 days) presented several newspaper stories with a story about rape embedded among them. Subjects, when exposed to the rape debriefing, gave the rapist in the newspaper report a higher sentence and saw the rape victim as less responsible for her own assault. However, these effects only occurred if subjects had been exposed to an example of a rape depiction which was relevant to both the rape myth discussed in the rape debriefing and the newspaper report of the rape. Specifically, only when subjects were exposed to an acquaintance rape scenario and given a debriefing which emphasized rape myths pertinent to that acquaintance situation (e.g., a woman who goes to a man's apartment deserves to be raped) was the debriefing effective. Further, there were no effects for receipt of the debriefing if it was preceded by a nonviolent mutually consenting scenario instead of a rape scenario.

The effectiveness of debriefings used in studies of long-term exposure to movies that are nonpornographic but portray violence against women in an extremely graphic manner (R-rated slasher films) has also been assessed. One aspect of these studies that is particularly noteworthy is the long-term nature of these follow-ups. Subjects who are surveyed as long as 7 to 8 months after participation in debriefings show significant increases in their sensitivity toward rape victims. In a follow-up study designed to assess effectiveness of the debriefing used in the Linz *et al.* (1984) study on long-term exposure to R-rated slasher films (Donnerstein, Penrod, & Linz, 1984), subjects were assessed several weeks before participation in the study, 1 to 3 days after participation in the study and receipt of the debriefing, and again 6 weeks later. At each point in time subjects completed the entire Rape Myth Acceptance scale.

The debriefing used in this study was a videotaped message in which one of the principle investigators cautioned subjects that "constant exposure to violence can desensitize or harden and make people callous to violence." The portion of the message particularly relevant to the rape myths portrayed in the films used in the study emphasized that

one problem with some of the scenes in the films that you saw this week is that they tend to reinforce certain myths about rape such as the notion that women who wear provocative clothing are asking for or deserve sexual assault, or that women who put themselves in a risky situation are setting themselves up to be raped and hence are responsible for what happens. The film *I Spit on Your Grave*, in which the woman was camping and canoeing by herself, illustrates this point.

The subjects were told that research has shown that films of this type

tend to reinforce and maintain these common but fictitious beliefs about rape. The results of the follow-up indicated that, immediately after participation in the study and debriefing, subjects' average scores on the Rape Myth Acceptance scale declined relative to the prestudy participation score by a few points (although the decrement was not statistically significant). The scores obtained 6 weeks later were nearly identical to the immediate postparticipation level scores (and still a few points lower than those obtained before the study).

Perhaps more compelling is a follow-up study conducted by Linz (1985) which attempted to assess the effectiveness of debriefings given to subjects who received either high (5 movies) or low (2 movies) doses of graphic filmed violence against women. As in the previous study, subjects' scores on the Rape Myth Acceptance scale were obtained before exposure to the violent films (in this case nearly 2 months) and again after participation in the study and debriefing. The films used in this study did not portray rape behavior per se, although the films could be interpreted as propagating a number of myths about blaming the victim for her assault if she places herself in certain situations. Consequently, subjects were told:

Even though there were no rape scenes in these films, these films tend to reinforce certain myths about rape and other forms of sexual assault. Some examples of the types of rape myths that these films may have reinforced are that "only certain types of women get raped," or that "if a woman really wanted to fend off an attacker, she could," or that "women who dress provocatively are asking to be sexually assaulted."

After receiving this message (conveyed by videotape), subjects were told they would be contacted later and were dismissed from the laboratory.

As in the previous study, the effectiveness of the debriefing was assessed, but instead of surveying subjects 6 weeks after participation, the subjects were requested to complete the Rape Myth Acceptance scale 6 to 7 months after participation in the study and debriefing. The results of this follow-up indicated that subjects experienced a statistically significant decline in Rape Myth Acceptance relative to their prestudy levels. Further, the decline in this index was equal in magnitude for both the large-dosage and small-dosage film exposure groups.

Similar decreases in Rape Myth Acceptance after a proper debriefing can also be found among female participants in studies involving exposure to sexually violent media. Previous research on female subjects' sexual responsiveness to rape depictions indicates a tendency for women to become sexually aroused to rape depictions if the depiction

emphasizes the women victims of rape becoming sexually aroused by the experience (Stock, 1983). More recently Krafka (1985) has found that females exposed to R-rated nonpornographic sexual violence (slasher films) become emotionally desensitized (less anxious and depressed) to these depictions with repeated exposure, and later, when asked to evaluate a videotaped reenactment of a physical assault-rape trial, are less likely to convict the defendant.

As with studies involving males, females exposed to sexual violence are thoroughly debriefed after participation in these studies. They are warned about the possibility of becoming desensitized to the violence in the film stimuli used in the study and are also debriefed concerning the portrayal of various rape myths in sexually violent movies. In addition to pointing out these concerns, females in the study by Krafka (1985) also received an additional message concerning the more general belief prevalent in our society that women are sexually aroused by force:

The sum total of rape-myth says that women enjoy rape, will be sexually aroused by force, and that they ask to be raped in subtle, if not direct, ways. One of the most common sexual fantasies for women, in fact, involves rape—a point that is not lost on the writers of best-selling romance novels. A common theme of the romance trade is that a handsome devil-hero ravishes the novel's heroine in a fit of uncontrolled passion; she later falls in love with her ravisher. The popularity of the romance novel is due in part, I think, to their ability to play on our fantasies. But important distinctions must be made between the fantasy and the fact of rape. First of all, fantasy does not typically involve violence or pain. The typical rape fantasy involves being overwhelmed gently by a man who considers one so desirable that he quote "simply cannot control himself." Second, fantasy is safe. Lots of people, male and female alike, experience things through fantasy that they would never want to experience in real life.

Fantasy is okay—and yet we know that the typical real-world rape bears little resemblance to either rape as it is depicted most often in film or to the kind of pseudo-rape which might play out in a woman's fantasy. Rape is a crime, and it is a crime of violence that has little to do with the satisfying of sexual urges. It involves coercion or threat in some form, and in a large percentage of cases, requires physical force to subdue the victim. This may result in pain or serious injury to a woman, and most women who have been assaulted respond with extreme emotional trauma. Film-depicted rape tends to gloss over unpleasanties, so consequently, it doesn't reflect reality.

Follow-up evaluations of the effectiveness of a debriefing containing this type of message have been undertaken immediately, 6 weeks, and 6 months after participation in the study and debriefing (Krafka, 1985; Chapin, 1985). The results of these evaluations indicate that exposure to sexually violent materials coupled with debriefings will produce significant reductions in rape myth acceptance (compared to a baseline mea-

sure taken several weeks before participation in the study) not only immediately, but also that these effects will remain 6 months later.

E. What Factors Mediate the Effects of Debriefings?

As we have seen, subjects participating in studies using violent pornographic depictions as well as studies using nonviolent pornographic depictions of violence against women, who have received a proper debriefing, emerge from this experience more sensitive to cultural stereotypes about violence against women. Further, these effects have been found in studies in which subjects have been exposed to relatively large or relatively small doses of sexual violence during the experimental phase of the study, for male subjects as well as female subjects, immediately after participation in the debriefings and 6 to 8 months after participation.

What is it about the debriefings and/or participation in the studies themselves that leads to these changes? The results of two of the studies that we have reviewed (Malamuth & Check, 1984; Check & Malamuth, 1984) suggest factors about participation in sexual violence experiments and debriefings that may be of great importance. First, as Check and Malamuth (1984) note, it is probably necessary to specifically tailor the debriefings to the types of myths portrayed in the material used during the experimental phase of the study. Debriefings which focused on rape myths not specifically portrayed in the experimental phase of the Check and Malamuth (1984) study, for example, were not effective in reducing rape myth acceptance. This finding seems congruent with the research by Donnerstein *et al.* (1984), Linz *et al.* (1985), Krafka (1985), and Chapin (1985), where debriefings were presented in a videotaped format which was interdispersed with specific examples from the material presented to subjects during the preceding phase of the experiment. Second, messages dispelling rape myths might be most effective for subjects who had first been exposed both to the rape scenarios in the experimental portion of the study and to the debriefing. Debriefings coupled with preexposure to consenting sex scenarios in the Malamuth and Check (1984) study were relatively ineffective in changing attitudes about rape. These findings imply that it may be necessary for subjects to first become aware of increased levels of sexual arousal in response to the rape passages or to experience desensitization in the face of violent portrayals and then to receive a debriefing which addresses these processes. As Malamuth *et al.* (1980) point out, the debriefing might provide the subject with a certain kind of insight comparable to that experienced by students who become aware of racist feelings during a study on social

prejudice. This may also be the case for subjects who have participated in studies using nonpornographic materials that portray rape myths.

We might add to this Nisbett and Wilson's (1977) observation that many psychological phenomena, such as the inhibition of helping due to the presence of bystanders (Latané & Darley, 1970), and many experiments within the insufficient justification paradigm (Aronson & Mills, 1959) probably would not occur in the first place if people were aware of the impact of certain critical stimuli. If subjects were aware of the effects of the presence of others on their tendency to help, they would undoubtedly try to counteract that influence. Similarly, as Kelley (1967) has also noted, results of insufficient justification experiments could never be obtained if subjects were aware of the critical role of social pressure from the experimenter. If subjects realized that their behavior was governed by this pressure they would not have been motivated to move their attitudes into line with their behavior because they would realize that their behavior was the result of external pressure, not their own attitudes. The debriefings used in sexual aggression experiments might provide subjects with similar sorts of insights about psychological processes. This insight might then be useful for subjects in short-circuiting these effects in the future.

To say that this process might serve to "inoculate" subjects against uncritical acceptance of rape myths (in the classic persuasion and attitude change paradigm, e.g., McGuire & Papageorgis, 1961), as have Check and Malamuth (1981), may be somewhat inaccurate, however. According to Check and Malamuth (1981, p. 17), "presenting a pro-rape communication (e.g., a rape depiction likely to result in subjects perceiving the victim as a willing and perhaps blameworthy participant in the assault) and then presenting counterarguments designed to dispel such rape myths (e.g., a rape debriefing) may serve to immunize subjects against uncritically accepting rape myths in the future." It is difficult to see exactly how decreased acceptance of rape myths would be predicted by an inoculation to persuasion approach as long as we adhere closely to McGuire's original formulation. It is possible, for example, that rape myths may be beliefs that are similar to the "cultural truisms" that, according to McGuire and Papageorgis, people are unpracticed at defending. As Petty and Cacioppo (1981) note, because people have no counterarguments with which to resist a persuasive message against these truisms, they remain highly vulnerable to influence. McGuire (1964) suggested that an inoculation treatment would consist of exposing people to a few pieces of counterattitudinal propaganda prior to exposure to the threatening message and showing them how to refute these arguments. According to the theory, presentation of weak coun-

terarguments produces resistance to future attacks against the cultural truism because the inoculation poses a threat that motivates people to develop arguments to bolster their initial beliefs. Thus, relatively weak attacks (such as debriefings) might actually produce more resistance in people to future attempts to dispel rape myths, not greater critical evaluation of rape myths.

Finally, a word of caution. As the research currently stands it is difficult to tell from any of the studies reviewed if *any* aspect of the debriefings actually accounts for changes in subjects' rape myth acceptance. Those debriefings which have been effective in changing subjects' beliefs have always been preceded by exposure to the rape depiction phase of the experiment. Consequently, it is impossible to rule out the possibility that exposure to the rape materials alone and participation in some other activity besides the debriefing, or even sufficient time for subjects to reflect or rest, might result in lowered rape myth acceptance or at least a return of rape myth acceptance to prestudy participation levels. Malamuth and Ceniti (1986), for example, have found that subjects exposed to violent pornography who are asked 1 week later to participate in an ostensibly unrelated experiment involving the administration of aversive noise showed no increases in aggression. The findings of this study stand in apparent contradiction to the results of previous studies (Donnerstein, 1980a,b, 1984; Donnerstein & Berkowitz, 1981; Malamuth, 1978). As Malamuth and Ceniti (1986) point out, the important difference between these studies and their own is that earlier investigations examined aggressive behavior immediately after subjects were exposed to violent pornography, rather than testing for relatively long-term effects. Findings from the Malamuth and Ceniti study suggest that with time subjects might return to baseline levels of hostility and aggression toward women. Rape myth acceptance among subjects exposed to violent pornography might well decline naturally with the passage of time also. However, examining the possibility of this decrement with time would involve exposing subjects to rape depictions and *not* debriefing them—a procedure that is considered to be unethical by researchers in this area.

III. DESIGNING INTERVENTIONS TO COUNTER SEXUAL VIOLENCE IN THE MEDIA

One way to test the idea that providing subjects with knowledge about psychological processes might counter the effects of violence viewing would be to design an experiment directed at reducing accep-

tance of rape myths and aggressive behavior toward women in the laboratory through the use of *prebriefings*. Messages could be designed which inform subjects about the effects of exposure to violent pornography and other forms of aggression against women and be administered before participation in experiments using these materials.

Recently, Bross (1985) has examined the effectiveness of a prefilm message informing male viewers who were later exposed to large doses of R-rated slasher films about the psychological processes which might be operating. These prefilm messages explained to subjects what psychological effects might result from viewing sexually violent media. The message was similar to videotaped debriefing presented after participation in experiments involving sexually violent materials (e.g., Linz et al., 1984; Linz, 1985). Clips of scenes from slasher films were interspersed throughout the filmed message to assist subjects in understanding the effects that can be caused from viewing slasher films. Of special interest were the subjects' awareness of desensitization to violence in general and possible positive perceptions of violent scenes when they are juxtaposed with sexual ones.

Thirty-three male introductory psychology students took part in the experiment. Eleven subjects were exposed to the manipulation, while the other 22 were examined for comparison purposes. All subjects were pretested on hostility and psychoticism scales (no subjects scoring above one standard deviation on these scales was permitted to participate in the studies). These measures were used to ensure that no subject entered the study with a high degree of hostility, especially toward women, when in interaction with viewing the films could pose a risk to the community.

Subjects were informed that they had been chosen to take part in a film evaluation study and were to view six full-length feature motion pictures (all R-rated slasher films) over the period of 2 weeks. Subjects in the experimental conditions saw the prefilm message before viewing the first film. The control group simply saw the first motion picture after signing the consent form. All subjects viewed four more slasher films over the next 2 weeks. After each film subjects indicated how much violence they perceived in the films, how degrading the films were to women, the realistic nature of the violence, and self-reported physiological arousal. On the final day of the experiment, all subjects were contacted by phone and told that the last film they were originally scheduled to see had not arrived and were asked if they would take part in a study being run by the University's Law School. All agreed and reported the next day to the law school courtroom, where they viewed a videotaped reenactment of a mock rape trial. Following the viewing, subjects

evaluated a number of aspects of the trial (to determine if there were any "spill over" effects into decision making in a more realistic context).

Five commercially released movies were viewed by the subjects during the 2-week study. All of the films were R-rated and were chosen because of their graphically violent nature. Titles included: *The Toolbox Murders*, *Texas Chainsaw Massacre*, *Maniac*, *Nightmare*, and *Friday the 13th, Part III*. To ensure that there were no ordering effects, the viewing order of the films was counterbalanced within the control group (i.e., half saw Film One on the first day, while the others saw Film One on the last day). The videotaped mock rape trial involved an alleged rape at a fraternity party. The defendant (a fraternity member) is accused of hitting (injuring) and then raping a fraternity "little sister" with whom he is previously acquainted.

The prefilm message is a videotaped presentation with clips from slasher films edited into the tape. The message stated:

During the next 2 weeks we will show you six full-length feature films and then will ask for your reaction to these films. The six films you will see during the next 2 weeks have one thing in common. They are all R-rated, which means they all contain scenes of explicit aggressive behavior. In addition, the films may contain scenes of a sexual and/or erotic nature. I would now like to discuss with you the effect that this type of material can have on viewers.

One major problem with these films is that constant exposure to violence can desensitize or harden and callous people to violence in general. As an example, we will show you some scenes from these films. [Film Clip]

While you may initially find some of the violence in these films disturbing, it will perhaps become a little easier to tolerate the violence after continued exposure. This is a normal reaction. You should, however, be aware that this type of film can make people less sensitive to violent acts.

Another concern we have in reference to desensitization to violence is that many of the films that you will see are particularly violent in regard to women. For example, the following scenes are among those you will see. [Film Clip]

We are particularly concerned about the issue of violence against women. Just as you may experience desensitization to violence after viewing these types of films, you may experience the same effect with regard to violence against women. Again, you should be aware of this issue and sensitive to this problem.

A second major problem is that in many of the films an erotic or sexual scene is combined or juxtaposed with a violent scene. As an example of this type of combination, here is a scene from one of the films. [Film Clip]

This type of scene may quicken the process of desensitization that makes one more tolerant of violence. Also, such a combination places the violence in a very positive context because it occurs while the viewer is aroused or in a very positive state. Many of the violent scenes you will see are preceded by sexual, sensual, or erotic content. One potential problem with this combination is that some individuals who become sexually aroused to the sexual portion of the scene also become sexually aroused to the violent portion of the scene. Again, this is a normal reaction for some individuals but you should be aware that this type of conditioning can occur. Further, you

Table II. Day 2 Mean Scores on Film Evaluation Items

Item	Prefilm message (<i>n</i> = 10)	No message (<i>n</i> = 20)	<i>F</i>	Tail probability (<i>p</i>)
Number of violent scenes	3.8	3.36	1.97	.17
Violence toward woman	6.1	5.10	1.91	.17
Combinations of erotic and violent scenes	11.4	9.08	2.10	.15
Degrading to women	12.7	10.70	4.96	.03
Realistic violence	2.9	4.00	2.38	.13

should be aware that some individuals become less sensitive to this type of violence, especially violence against women when the violence is placed in an erotic context. You should be aware that films like these can condition people to become sexually aroused during violent scenes.

Thank you very much for your cooperation in this film evaluation study.

It should be noted that this message attempts only to increase awareness among subjects of the psychological processes which might be the result of continual viewing of slasher films.

The results indicated that, overall, subjects exposed to the prefilm message were less susceptible to the effects of the slasher films on the first day of the study than were those who were not exposed to the message (see Table II). Although the differences were not statistically significant, subjects in the message condition reported seeing more violent scenes (number of scenes) and more violent scenes directed at women than did subjects in the no-message condition. Subjects exposed to the prefilm message also reported seeing more combinations of erotic and violent scenes than the nonexposure subjects on day one of the experiment. Subjects in the message condition found the day 1 film to be significantly more degrading to women ($F(30) = 4.96, p < .03$) and the violence to be less realistic than did subjects in the nonexposure group. There was no discernible pattern of differences between prebriefed and control subjects' responses to the mock rape trial questionnaire.

Another finding that should be noted was the high drop-out rate of subjects who had been exposed to the prefilm message. Eleven subjects were originally shown the message on day one of the study. One subject decided not to continue his participation in the study immediately after viewing the message. Over the 2-week experimental period, four more subjects dropped out of the study (over 45% of those originally shown the message). The no-message group had only a 32% drop-out rate.

Comparisons between subjects who discontinued participation in the experiment and those who decided to stay throughout indicate some interesting trends. Those who dropped out of the study reported seeing more scenes of violence, more combinations of erotic and violent scenes, and found the film to be more degrading to both men and women on day one than those who stayed for the duration. Subjects who dropped out of the study also reported more physiological arousal to the first film than those who completed the entire study. The message might have convinced subjects to leave the study. In fact, the subject who decided to discontinue his participation immediately after viewing the prefilm message stated that he did not want to be exposed to the slasher films because of the possible effects that were mentioned in the videotaped message.

The findings from this small-scale study are, of course, only suggestive. The effects for the most part are only trends, and even these manifested themselves only immediately after the first film viewing in a 2-week-long study. Yet these findings and the results of Huesmann *et al.*'s program designed to counter the effects of television violence suggest that it may be possible to design an intervention program for young adults to assist them in making critical evaluations of sexual violence in the media.

As the reader will recall, Huesmann *et al.* (1983) reasoned that there may be three factors contributing to the likelihood that a child would behave more aggressively as a result of violence viewing: (1) the child's perception of the violence as realistic, (2) the child's identification with the TV character, and (3) the child's beliefs about society's acceptance of aggression. Huesmann *et al.* (1983) have devised a successful intervention program based on these three factors. A very similar set of factors may account for the young male adult's acceptance of sexual violence against women and predisposition toward aggressive behavior following exposure to violent pornographic depictions. It is possible that an intervention designed to change males' perceptions that the portrayals of sexual violence or rape in the typical violent-pornographic film are realistic reduces the likelihood of males identifying with the aggressor in the pornographic film and changes males' beliefs about the acceptability of aggression against women. It also provides subjects with descriptions of the possible psychological effects of prolonged exposure to violence against women and may result in less acceptance of violence against women and lowered predispositions to aggress after exposure to violent pornographic films.

As Huesmann *et al.* point out, such an attitude-change program may be most effective if based on prior research on cognitive consistency and

the persistence of attitude change (Cook & Flay, 1978). As Cook and Flay (1978) note, programs of attitude change which involve making salient the inconsistencies between attitudes and behavior (emotional role play, behavioral rehearsal, modeling) or inconsistencies with cognitions about the self seem to produce persistent attitude change. For example, observing one's own behavior usually causes greater and more persistent change than observing others behave in some counternormal way (Bandura, Blanchard, & Ritter, 1969; Mann & Janis, 1968); an attribution manipulation (in which the subject can only justify his/her counterattitudinal behavior by referring to an internal disposition or motivation rather than some external motivation) results in greater attitude persistence than the simple receipt of a persuasive message (Miller, Brickman, & Bolan, 1975); and writing one's own counterattitudinal message will produce more persistent change than passively reading a message (e.g., Watts, 1967). Examples of some of the long-term changes caused by consistency approaches include teaching children self-control and honesty—with effects persisting for periods up to 6 weeks (Freedman, 1965; Lepper, 1973)—and reducing smoking for up to 18 months (Mann & Janis, 1968). These approaches have also produced decreases in ethnocentrism (directed toward the physically handicapped) which have persisted for over 4 months (Clore & Jeffrey, 1972) and have reduced phobic behavior of many kinds for periods as long as 2 years (Cook & Flay, 1978).

Operationalization of the consistency approach for changing attitudes about sexual violence might include: (1) crediting adolescent males for possession of the attitudes we wish them to adopt, (2) inducing behaviors that would lead to the self-attribution of these attitudes, (3) inducing perceptions of personal responsibility for an outcome related to the attitudes, (4) inducing the perception of participation out of free choice, and (5) promoting the perception that the consequences of their behaviors are important. The subjects could be asked to help (in exchange for a small payment) prepare a videotape on sexual violence. This film, they would be told, will be used in area high schools to inform male adolescents who have been fooled by mass media depictions into thinking that women desire sexual violence. The subjects could then be informed by the experimenter that he/she assumes that the subjects do not really believe the message being advocated, but a younger adolescent male might and might therefore get himself into trouble for imitating such behavior. Subjects would then spend time composing essays on the "myths about sexual violence" which will be read and evaluated by the experimenter and then rewritten by subjects. These essays will then be read before a video camera. Subjects could be instructed to focus on the

unreality of sexual aggression as presented in the media and why it is harmful to adopt attitudes which trivialize rape and sexual violence. These instructions will be presented only as rough guides, as the experimenter will emphasize the need for subjects to contribute their own ideas. Each subject's videotaped reading will then be played before the entire group of subjects so that the group may evaluate the product.

This intervention procedure could be tested against a direct persuasion approach designed to teach subjects (1) that women do not enjoy, desire, or become sexually aroused by violence and rape, and (2) that repeated exposure to violence against women may desensitize subjects to violence, not only in the films, but perhaps to the plight of other actual victims of violence. This intervention would essentially be comprised of debriefing tapes and scripts we have used in previous studies. After subjects have participated in the interventions, several measures of intervention effectiveness could be taken, including: (1) self-reported sexual violence viewing (in a follow-up assessment), (2) ratings of realism in portrayals of sexual violence (i.e., portrayals of the myth that women desire sexual violence, (3) general attitudes toward rape and rape victims, and (4) identification with sexual aggressors.

IV. SUMMARY AND CONCLUSIONS

In this chapter we first reviewed the findings of studies examining the impact of television violence on children and attempts to mitigate these effects with an attitude program by Huesmann *et al.* (1983). We also discussed research findings in the domain of sexual violence including pornographic and nonpornographic depictions of violence against women. We noted that research on the effectiveness of debriefings following participation in these studies indicates that subjects who participate in experiments involving exposure to sexual violence and who receive an appropriate debriefing emerge from this experience more sensitive to the issues of violence against women and rape than before participation. This suggests that a program based on the best features of programs designed to counter the effects of television violence and of debriefings from sexual violence experiments might be effective in providing adults with the critical viewing skills necessary to counter the effects of exposure to violence against women in the media.

In closing we might add that, while programs designed to mitigate the effects of sexual violence on young adults are certainly worth undertaking, waiting until late adolescence or early adulthood to teach critical viewing skills may, in fact, be waiting too long. A recent report on the

viewing patterns of a sample of 4500 children in England and Wales (countries that have declared many of the sexually violent films which receive an R-rating in the United States to be "obscene") indicates that by the ages of 7 and 8, 6.5% of boys in those countries have seen the movie *I Spit on Your Grave*. The percentage climbs to nearly 20 by age 13–14 (Hill, Davis, Holman, & Nelson, 1984). Comparable data for the United States is not currently available. One can probably safely assume that if 20% of preadolescent males have seen a film declared liable for prosecution, and thus relatively scarce in Great Britain, a much larger number of preadolescents have probably been exposed to such films in the United States. In addition, with the current availability of home videocassette players and cable television services devoted to "adult" entertainment—much of which may include sexual violence—we should expect that an even greater number of young children will be exposed to these materials in the future.

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Social Control and/or/as Aggression

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I. INTRODUCTION

The two concepts, social control and aggression, are an invitation to play with words. As suggested in the title of this paper, they might as easily be joined by other prepositions—social control *as* aggression, social control *or/of* aggression (the assumption upon which traditional control strategies are based). Reversing the order, *aggression as social control* conveys still other meanings. It will be the purpose of this paper to explore some of the implications of this exercise in word playing.

My colleagues in this volume have sought to bridge the gap between individual and social controls on aggression by taking into account social factors and policies in their presentations. Nevertheless, the nature of social controls has not been their major purpose.

The concept of social control has undergone several historical and definitional transformations in sociology, as Meier (1982) explains. American sociologists such as E. A. Ross and the early Chicago school of urban sociology viewed social control as "the maintenance of *social order* through the continuation of effective *social organization* (Meier, 1982, p. 36, emphasis added). They were concerned with "the capacity of a social group, including the whole society, to regulate itself" without resort to coercive control (Janowitz, 1978, p. 3). Empirically, research focused on the social impacts of vast forces of social change: immigration, urbanization, and the inexorable operation of ecological processes, in the wake of which social relationships tended to become impersonal, often anonymous, and social organization deteriorated, creating social *disorganization*. Primary group relationships (principally family, friends, and com-

munity), which traditionally constrained violence and other types of antisocial behavior, were observed or hypothesized to lose their cohesiveness and constraining power. Indeed, they were often rent by "culture conflict," accompanied by violent encounters within immigrant communities and between residents of those communities and others in the host society (Thomas, 1921; Sellin, 1938). "Deviant," often antisocial, groups and subcultures flourished under these conditions. These twin forces—the weakening of traditionally constraining groups and institutions and the increasing presence of deviant influences—were believed to account for much of the behavior which departed from conventional norms of civil society, including violence and other types of aggressive behavior.

This conception of social control and of the forces leading to deviant behavior was found to be simplistic. Deviant behaviors and groups and subcultures supporting them were found to flourish side-by-side with conventional groups in well-organized communities. Primary groups were found to be the locus of much deviant behavior, including violence. Institutions established to control such behavior were found to cause, or at least contribute to, violence and other forms of deviant behavior, sometimes deliberately, sometimes inadvertently (see below).

Other definitions of social control and other concerns followed by sociologists and lawyers, such as Holmes and Pound, who became advocates of "sociological jurisprudence," emphasizing purposive intervention by the state in human affairs. Indeed, such a variety of definitions and interpretations of the meaning and the nature of social control were developed that Meier is led to the conclusion that "we have expected too much of the concept of social control; we have made it so elastic that it fits almost every meaning" (Meier, 1982, p. 53).

In the context of this volume we share a common concern with the control of violence and aggression, by whatever means. These specific concerns can be separated from social control in general only at great peril, however, hence my discussion will, for the most part, be quite general.

II. DEFINITIONS

The National Commission on the Causes and Prevention of Violence defined violence as "the unlawful threat or use of force by any individual or group that results or is intended to result in the injury or forcible restraint or intimidation of persons, or the destruction or forcible seizure of property" (National Commission, 1969, p. xix).

Aggression is a broader concept, since it includes offensive actions other than violent behavior. The major concern of contributors to this volume is with controlling the violent behavior of individuals, chiefly interpersonal violence. The extensive literature on collective violence will, therefore, not be covered (but see Short & Wolfgang, 1972). Much interpersonal violence, and individual violence in general, takes place within group, organizational, and institutional contexts, however, and these contexts often are important when the topic of interest is social control.

As for social control, consider the definition recently proposed by Gibbs (1981). Gibbs defines social control as an attempt by one party (that is, individual or group) to manipulate the behavior of another party (individual or group) through the agency of a third party (individual or group). Thus, for examples, A calls upon the police (third party C) to "do something" about his neighbor's (party B) threat or assault. Or, more abstractly, a citizenry or particular groups or segments of a citizenry (party A) calls upon its government (party C) to promulgate laws and to carry out sanctions against miscreants (party B), potential as well as discovered in their midst.

The direct influence on the behavior of an individual or group by other individuals or groups is, by this definition, not social control. Attempts by third parties to influence (manipulate) the behavior of *directly influencing* individuals or groups or of other directly influencing forces or processes is included, however. Examples would be the attempted manipulation of a violent delinquent gang by a third party (let us say a detached worker) in order to change the behavior of one or more members of the gang (see Short & Strodbeck, 1965, 1974) or police intervention with other family members in order to change the behavior of a father who has abused his wife or children (see Sherman & Berk, 1984). Examples of other directly influencing forces/processes are socialization practices of parents, peer influences, and mass media of communication. In addition, there is debate as to whether, and how, influences associated with social structure (e.g., social class, age, sex, race, and ethnicity) should be considered with respect to social control. Limiting the concept of social control to third-party efforts is viewed by many as too limiting, in view of the obvious importance of these types of influences.

For the most part, social structural influences fall outside the scope of this chapter, except as they are associated with the emergence of types of violent behavior as social problems. An important aspect of the social construction of social problems concerns efforts on the part of third parties (interest groups, participants in social movements) to establish

formal mechanisms of direct control (e.g., police, prisons, professions). These are often linked to social class and/or cultural groups, as well as to particular professions (see Spector & Kitsuse, 1976; Mauss, 1975). We will, however, discuss certain directly influencing professions and events inasmuch as they bear on the control of interpersonal violence.

III. UNINTENDED CONSEQUENCES OF SOCIAL CONTROL

Though he does not deny that social control may have unintended consequences, Gibbs also proposes that the term be reserved for *intentional* behavior. Because unintended consequences of social control are often important, however, their study comes within the purview of this chapter. Indeed, study of the unintended consequences of governmental and other institutional control efforts has been a major preoccupation of sociologists and social historians for approximately the past 40 years. Whether and under what circumstances, for example, have social control efforts directed toward delinquents and criminals *contributed* toward their deviance, rather than or in addition to correcting or deterring delinquent and criminal acts? Marx (1981, p. 222), for example, identifies three ways in which rule-breaking behavior may be encouraged, or even generated, by social control actions. These include (1) situations in which rule breaking is *escalated*, as when enforcement action unintentionally encourages rule breaking, (2) situations in which "by strategically taking no enforcement action, authorities intentionally permit rule breaking," (3) "covert facilitation" by authorities, involving deceptive or hidden enforcement action designed to encourage rule breaking.

Each of these may involve violence. Examples abound, though systematic research concerning their antecedents and consequences is lacking. Police efforts to control riot behavior have often escalated the violence they were intended to stop, or prevent, as well as being exceedingly violent themselves (National Commission, 1969; Stark, 1972). Violence associated with competition and conflict between criminal organizations often escalates following law enforcement crackdowns on illegal goods and services, such as drugs and prostitution. The reason is simple. More effective law enforcement makes more valuable the illegal commodities at risk. Increased profits are therefore available to those who control such commodities. Another example is the large amounts of money made available to law enforcement agencies during the 1970s for buying drugs, as part of enforcement strategy, which increased opportunities for informers, some of whom were killed by those

upon whom they had informed (Marx, 1981, p. 225). In Chicago, we found that funds made available to gangs, as part of federal government efforts to change (read "control") their behavior by creating legitimate economic opportunities (as part of the "War on Poverty"), also created opportunities for fraud, extortion, and violence by gang members (Short, 1974).

The use of informants—widely viewed as essential to law enforcement—typically involves *nonenforcement* of laws concerning criminal behavior of informants, as well as encouraging retaliatory violence by those informed upon. The latter may be intended, but more often it is unintended but regarded as a by-product of the strategy. Vigilante action also may involve nonenforcement, as police "look the other way," permitting—even encouraging—mobs or groups of citizens to take the law into their own hands, thus carrying out actions which they feel constrained not to take. Familiar examples in American history include lynch mobs and organized violence against blacks and other minorities.

The use of *covert facilitation* by law enforcement agents has become increasingly popular in recent years. Counterintelligence activities, often involving "the creation of motives" to commit crimes, may involve considerable violence. Marx notes "dirty tricks campaigns," in which police "take clandestine actions in hope of provoking factionalism and violence," such as "leaking" information or planting evidence suggesting that a suspected criminal or targeted political radical is a police informant. This type of law enforcement activity has also been employed against organized crime (see Talese, 1972).

Unintended as well as intended consequences may follow from any social control strategy. The results of social control actions thus clearly are problematic, both with respect to what is intended and what is not. A good deal of scholarly work also has gone into studies—at times deteriorating into polemics—concerning what precisely has been intended and how successful these efforts have been; for example, whether—or the extent to which—social control efforts such as penal policies reflect social class interests on the one hand, and on the other, a conspiracy designed to control the working classes and the dependent poor.

IV. CONSENSUS VERSUS CONFLICT AS THE BASIS FOR SOCIAL CONTROL

Much recent scholarly work has served to demonstrate two important points with respect to these issues: (1) conspiracy theories—indeed any

doctrinal theory, Marxist, functionalist, whatever—are too simple; and (2) changes in social control policies often have little to do with what is *known scientifically* about the phenomena to be controlled (and even less with the *effectiveness* of the controls).

Historical studies demonstrate the former, for example, studies of English law and custom by social historians (see, e.g., Thompson, 1975; Hay, Linebaugh, Rule, Thompson, & Winslow, 1975; Ignatieff, 1978; Brewer & Styles, 1980; Bailey, 1981). Scholars in other countries also have contributed to this tradition, e.g., Rothman (1971) and Platt (1969) in the U.S., Foucault (1978) in France, and Cohen (1983), recently at Essex University and now at the Institute of Criminology at Hebrew University.

These studies have forever destroyed the notion that “law and order” are based solely on consensus regarding social values and objectives. The existence—if not always the extent and the nature—of conflicts of interests in both law and order has become clear. More recently, by filling in the history of crime, deviance, and social control, these studies have demonstrated both the *power* of the state and its *limitations* with respect to social control. Brewer and Styles, for example, conclude that, while the law in seventeenth and eighteenth century England “was a remarkably potent force,” it “conferred only limited power on those who were its beneficiaries. Both the *modus operandi* of the law and ideology that lay behind it served to constrain authority and to limit those who tried to manipulate the legal process” (Brewer & Styles, 1980).

In his summarizing statement concerning “Policing and Punishment in 19th Century Britain,” Bailey notes

a pattern which suggests both that the *consensual* view of police reform has underplayed the local resistance to a centralised police structure, and that the *conflict* view has too readily assumed the existence of a unified ruling elite, spurred into action by social fear. In all, the social reality which the historian is increasingly uncovering suggests the myopia of highlighting *any one set of interests* and events to explain the rise of the new police. [p. 13]

Finally, Ignatieff (1981), criticizing his own previous work as well as others, notably Foucault and Rothman, challenges the very “idea that the state enjoys a monopoly over legitimate means of violence. . . .” Crimes toward which official actions are taken are but “the tip of an iceberg,” the larger part of which consists of “disputes, conflicts, thefts, assaults too damaging, too threatening, too morally outrageous to be handled within the family, the work unit, the neighborhood, the

street." Here we part with Gibbs' restriction of social control to third-party actions, in view of the importance to interpersonal violence of direct influences by families, work groups, and local communities. Detailed historical study of dispute settlement and of local relations with and among the police, the courts, and the prisons has only recently been undertaken. As a result, "what is now opening up as an area of study is the social process by which crime was identified within these units of civil society, and how decisions were taken to channel certain acts or disputes for adjudication or punishment by the state." Correlatively, the processes by which "agents like the police worked out a tacit agreement with the local enforcers of norms, determining which offenses were theirs to control, and which were to be left to the family, the employer, or the neighborhood are being studied" (Ignatieff, 1981, p. 186).

Thus, social control involves many types of direct influences as well as "third parties" from those involved in the most intimate relationships with one another to the most remote institutions, from small groups of neighborhood residents and communities to institutions established at law on a national and international scale. The balances that are struck between these groups, institutions, and processes are an important part of social control.

V. KNOWLEDGE AND SOCIAL POLICY: THE SOCIAL CONSTRUCTION OF VIOLENT BEHAVIORS AS SOCIAL PROBLEMS

The second of the points mentioned in the previous section—that changes in social control policies often have little to do with what is known scientifically about phenomena to be controlled—was demonstrated by Sutherland's (1950) study of sexual psychopath laws and later by Becker (1973) and Duster (1970), who studied forces leading to drug legislation in the U.S. The historical works cited earlier bear on the same point, though they were not intended specifically for that purpose. A more contemporary example concerns the insanity defense in criminal law. In the U.S., the decision of the John Hinkley jury that young Mr. Hinkley was not guilty of the crime of shooting President Reagan by virtue of insanity has hastened the reexamination of that defense—and may lead to its demise—more certainly and more rapidly than any scientific claims or evidence concerning the relationship of mental states to crime.

More recently—and more directly related to the topic at hand—the operation of social processes related to new definitions of three types of

interpersonal violence—rape, child abuse, and “battered women,”—leading to their emergence as social problems (and therefore the object of new forms of social control, including professional practice and social policy) has been documented.

While rape has long been prohibited under the criminal law, both official handling of rape cases and public consciousness of the phenomena comprising rape have changed significantly since the late 1960s. Many practitioners and research scholars had begun to recognize that much forcible rape was primarily a crime of violence rather than of sexual gratification, with important subcultural as well as psychiatric and psychological variations (see Curtis, 1975), but it was not until the “anti-rape movement” gathered momentum that public perceptions of rape and social policies changed significantly (Rose, 1977). As a result of the activities of feminist organizations, aided by many law enforcement officials (and impeded by others), mental health professionals, and others, rape has become more widely defined as a *social problem*. As a result, some laws have been changed (e.g., regarding the definition of rape, the admissibility of evidence, and legal sanctions) and institutional and community programs of education (e.g., rape workshops), prevention (“hot lines” and escort services), and aid to victims (monetary compensation, counseling, and medical and legal services) have been widely adopted.

While definitive assessment of the effectiveness of social control programs based on these developments is not possible, it is clear that traditional social control methods (prosecution of offenders under the criminal law) have been modified in many jurisdictions and, more importantly, public understanding and attitudes as well as programs designed to control rape have been widely adopted. Little of this change, it appears, has been due to an increase in the knowledge base concerning the causes of rape. Rather, it is the result of complex social processes involving a variety of special interests, e.g., feminists, mental and physical health professionals, law enforcement officials, and others.

Child abuse, specifically the “purposeful beating” of children, is as old as recorded history, justified as necessary for behavioral, religious, and educational discipline and obedience. Children, like wives, have in many societies been regarded as property to be disposed of as adults, notably fathers, saw fit. Yet, in the United States, over “a four-year period beginning in 1962, the legislatures of all fifty states passed statutes against the caretaker’s abuse of children” (Pfohl, 1977). Pfohl and others have traced the history of earlier reform movements directed

toward "the plight of beaten, neglected and delinquent children," particularly the "house of refuge" movement, crusades by the Society for the Prevention of Cruelty to Children, and the juvenile court movement. These organizations focused on improving the lot of the child rather than on parents or guardians as offenders against children and, therefore, the objects of control. While law enforcement officials had occasionally intervened in extreme cases of child abuse, they were constrained by contemporary views of the sovereignty of parents within the family. Social work and psychiatry, the helping professions most often in contact with child-abusing parents, focused primarily on psychiatric disturbances internal to the family rather than on parents as offenders. The definition of child abuse as a social problem, bringing with it both legal and broader social reactions, "awaited the coalition of organized interests" (Pfohl, 1977, p. 315).

A coalition of medical specialties led to the social construction of child abuse as a social problem. The initial "discovery" was made by pediatric radiologists (see Caffey, 1946). By 1962, the American Medical Association endorsed "The Battered Child Syndrome." While there was some opposition to the definition of child batterers as "sick," chiefly from law enforcement, the legal community overwhelmingly endorsed treatment rather than punishment for abusers. The result was that statutes requiring the reporting of incidents of child abuse shifted from an earlier "Children's Bureau model of reporting to law enforcement agents" toward a model requiring "reporting to child welfare or child protection agencies" (Pfohl, 1977, p. 321).

As was the case with rape, a variety of voluntary associations took up the cause of battered children, and the mass media publicized the phenomenon through both news and entertainment vehicles.¹ In this way, an ancient phenomenon had been transformed into a major social problem, and a variety of policy changes and programs emerged to control it.

Like rape and child abuse, "wife beating" has emerged as a social problem only in recent history. Shelters for battered women did not become common until the 1970s. Yet, by 1980, "there were approximately 150 shelters in England sponsored by the National Women's Aid Federation, serving mainly poor and working-class women and their

¹ Media influences on crime are reviewed by Ball-Rokeach and DeFleur (1983). The most systematic and sophisticated study of media influences on a particular mechanism of social control—changes in a state penal code—is reported by Berk, Brackman, and Lesser (1977). They find that editorials in the *Los Angeles Times* were a better predictor of changes in the California penal code than were official crime rates, poll data regarding public opinion on crime, activities of special-interest groups, and a measure of political party activity.

children . . ." (Tierney, 1982, p. 207). The transformation of wife beating "from a subject of private shame and misery to an object of public concern" thus occurred in less than 10 years (Tierney, 1982, p. 210).

A variety of interests combined to bring about this transformation. Chief among them were "pre-existing organizations of feminists and groups in the social work, mental health, and legal professions," which combined to form a powerful professional social movement (McCarthy & Zald, 1973). In addition, the movement has proven to be flexible and adaptable to local conditions. It has "pursued a number of different strategies, including efforts to make the laws, the police, and the courts more responsive to victims; counseling aimed at equalizing power in the violent relationship; and perhaps most widespread, providing crisis shelter and support services for battered women and their children" (Tierney, 1982, p. 212). Note that the latter element provided an important *linkage* with the professional and other interests which were involved in the creation of child abuse as a social problem. In addition, the movement was able to remain flexible as a result of the large number of women seeking help and the varied nature of their problems. The scope of the problem and widespread media publicity ensured broad appeal to many groups and organizations.

Thus, Tierney's search of the *New York Times Index* between 1972 and 1978 found "not a single reference to wife beating as a social or community issue" during the first 3 years of her search. A 1973 story linked "police fatalities of domestic disturbance calls," and in 1974 an article "noted that New York City police and courts discourage battered women from pressing charges" (Tierney, 1982, p. 213). Coverage became more intense thereafter, and by 1978 "Battered Wives" appeared for the first time as a separate topic in the index. Similar trends occurred on other mass media. Support for meliorative activities associated with the movement by government and private sources also followed this pattern.

Those who have studied social movements note that they are often co-opted by government (see McCarthy & Zald, 1973; Mauss, 1975). Tierney believes this is happening with the battered women movement and that the result will be "toward conventional, social service-oriented programs . . . and the emphasis on feminist concerns will decline . . . away from 'radical' programs that challenge society's patriarchal values and advocate large-scale social change" (Tierney, 1982, p. 216). She also speculates that, "despite new laws to protect battered women from husbands and live-in companions, there may be fewer arrests and convictions as law enforcement agencies exercise the option of referring victims (or assailants) to domestic violence programs" (p. 216).

VI. REHABILITATION, PUNISHMENT, AND LABELING

Tierney is doubtful "that substituting counseling programs for legal sanctions will help battered women" (1982, p. 216). Her skepticism reflects the tension felt by many—scholars and laypersons alike—regarding the twin goals of penal policy: rehabilitation (by means of treatment) and deterrence (via punishment). Doubts have long been expressed that these goals are compatible, and the efficacy of both treatment and punishment strategies has been questioned, theoretically and empirically. In recent times these doubts have been fueled both by critics of state power in the service of dominant economic interests and by the advent of labeling and interactionist theories of deviance, which point to negative consequences of societal reactions to deviant behavior. A basic premise of the latter is that labeling persons and treating them as deviant—by arrest, conviction, incarceration—may create deviant self-conceptions as well as restrict conventional role opportunities, thus making violent and predatory behavior a more, rather than less, likely means of solving personal and economic problems.

The research literature in these areas is enormous, growing, and inconclusive (see, e.g., regarding deterrence research and theory, Gibbs, 1975; Cook, 1980; and regarding interactionist theory, Becker, 1973; Harris & Hill, 1982). Evaluation of treatment programs has likewise been extensive and has contributed to the confusion. Publication in 1974 and 1975 of the results of a survey of more than 200 evaluation studies of treatment programs left in its wake disillusionment and despair that rehabilitation was possible (Martinson, 1974; Lipton, Martinson, & Wilks, 1975). The conclusion of the survey was, to put it bluntly, that nothing works; more accurately, nothing had been demonstrated to work.

That conclusion has been challenged on many grounds: inadequate conceptualization of treatment and measurement of what actually happens in treatment programs, failure to measure the fit between concept and practice, inadequate criteria and measurement of treatment outcomes, weak research designs, etc. The criticisms were justified, but much damage was done to the rehabilitative ideal. The empirical results, combined with rising crime rates during the 1960s and 1970s and critiques of positivistic criminology by social historians and "new criminologists" (see Taylor, Walton, & Young, 1973), led to profound reexamination of the philosophical and political bases of social control policies with respect to crime (for an especially thoughtful review of these developments, see Empey, 1982).

Much confusion surrounds these controversies. The United States continues to suffer among the highest rates of most crimes in the world (see Gurr, 1980) and the highest rates of incarceration of convicted offenders for those crimes (see Mitford, 1981). Conventional prisons are exceptionally violent environments. Their populations consist largely of members of minority groups (especially black and Hispanic), thus adding to the perception of inequities in the justice system and in the larger society. Since the vast majority of prisoners eventually return to that larger society, it would be astonishing if prisons did not contribute to a violent society (see Ball-Rokeach and Short, 1986).

The rehabilitative ideal appears to be making a comeback, after a period during which it was in ill-repute (see Cullen & Gilbert, 1982). Yet many questions remain. The conclusion seems inescapable that treatments of various sorts—including incarceration—work some times with some people. The major question, therefore, is not whether one or another penal philosophy is correct and others incorrect, but rather *under what conditions* what types of punishment deter and treatments of various sorts rehabilitate. Similarly, the question is not whether labeling a person as criminal or in some other way deviant may be harmful to his or her self-concept or limit conventional opportunities, but the extent to which such harm occurs, and under what conditions. Further, insofar as social policy goals encompass both deterrence and rehabilitation, they may favor different strategies under different circumstances.

Research to test these ideas has suffered from inadequate designs, weak measurement, and inconclusive interpretations. When these deficiencies have been overcome, results have been suggestive, but hardly definitive. Sherman and Berk (1984) report, for example, that Lincoln *et al.* conducted a randomized experiment in which apprehended juveniles were assigned to four different treatments varying in degree of formality: release, two types of diversion, and formal charging. Data from this study indicate that repeated involvement in criminality, over a 2-year period, was associated with the more formal and official treatments (Sherman & Berk, 1984, pp. 261–262). This finding supports the labeling theory notion that official, formal handling of juveniles produces negative and unintended effects.

Experimentally varied police handling of misdemeanor domestic assault incidents, conducted and reported by Sherman and Berk, produced quite different results. Three types of police action (“arrest; ordering the offender from the premises; or some form of advice which could include mediation”) were assigned randomly to more than 300 such cases. After 6 months, police records indicated that the separation treatment had produced the highest rate of recidivism (as evidenced by a

written report on the suspect for domestic violence), and arrest, the lowest. "Advice," which ranged from doing nothing to mediation, was "indistinguishable from the other two effects" (Sherman & Berk, 1984, p. 267). Self-reports from follow-up interviews with the original victims produced similar results.

To place the matter in perspective, 26% of the "separated" offenders committed a repeat assault, compared to 13% of those arrested. Sherman and Berk were able to rule out incapacitation as the explanation for the more favorable arrest results. Here, then, arrest was a more effective deterrent than were the other two "treatments." Sherman and Berk were quick to point out the limitations of the study. Still, the results are suggestive, particularly in view of the well-known reluctance of police to intervene in domestic disturbance cases, especially via arrest. At the very least, it is clear that the "deviance" at issue—domestic violence—was not amplified by arrest. Sherman and Berk note, also, however, "that only three of the 136 arrested offenders were formally punished by fines or subsequent incarceration" (1984, p. 270); thus, punishment beyond arrest is ruled out as a factor in the observed deterrent effect of arrest.

Studies such as these highlight the need for careful conceptualization, research design, and measurement of both treatments and effects—conditions not generally met in the study of social control effects. The fact that changes in social control policies often are based not on advances in knowledge, but rather on the activities of claims-making interest groups (see Spector & Kitsuse, 1977), social movements (see Mauss, 1975), or the self-interested actions of the powerful, is not to argue that the pursuit of knowledge of the relationship between biological, pharmacological, emotional, cultural, and social causes of problematic behavior is doomed to failure. Nor is it the case that such knowledge will be ignored by the public, in professional practice or social policy. Quite the contrary. There is much evidence that public groups, professionals, and policy makers want to know the causes of problematic behavior, including violence, and that they do respond to such knowledge (see e.g., Komarovsky, 1975). Study of how such knowledge is used, by whom, and to what purpose, is necessary, however, if we would understand both the behavior and its control. This, among other things, is the province of social control.

A greater danger to rational and humane social control than that posed by either the lack of knowledge or control policies based on less than complete knowledge may be posed by abuses of knowledge, as depicted in novels such as "Clockwork Orange" and in the Orwellian vision of "1984." While these extreme types of threat seem remote from

contemporary society, they serve as reminders of possibilities inherent in many advances in science and technology.

A more realistic threat—some would say present danger—to humane social control is that posed by what has been called the “new behaviorism” in criminology (Cohen, 1983). Decline of the rehabilitative ideal and policies based on that ideal have been increasingly accompanied by laws and social policies designed to control behavior rather than to change people or the conditions in which they live. The result is that causal processes tend to be ignored and/or regarded as irrelevant. Wilson’s (1975) rationale, that causes of crime are unproductive as objects of policy because they are difficult or impossible to change, has been persuasive to many. Crime control models based on this rationale tend to be technicist and unconcerned with causes or causal theory. Cohen (1983) notes that a feature of this new behaviorism “is its insistence that causes are unimportant: the result is what matters and causal theories are either contradicted by the programme or quite irrelevant to it . . . trying to figure out why people commit crimes is futile: the point is to design a system of deterrence which will work without knowing what factors would promote crime in the absence of deterrence” (p. 125).

This rationale takes different forms in practice and in philosophical justification. Those who are fearful of the power of the state and mindful of its abuses advocate punishment as a “just dessert,” minimal intervention on the basis of the nature of the offense, rather than the offender, in the interest of avoiding harm. Those who embrace a more utilitarian, and generally “conservative,” view are more confident of the deterrent value of punishment and regard punishment as an important means of maintaining social order. While in both forms the rationale falls short of ends justifying means, in practice the result is often dehumanizing. Again, the thrust of controversy seems misplaced, for the proper question is not whether, but under what circumstances, incarceration, punishment, or “treatment” of any sort deters and/or reforms. Of equal importance in the long run, separation of causal theory and research from social policy condemns the latter to treatment of symptoms and is counterproductive to the cumulation of knowledge and the goal of policy determined by a public informed by that knowledge.

VII. LEVELS OF EXPLANATION AND THE CONTROL OF VIOLENCE

Discussions of social control, as of other topics as well, often “talk past

each other" because problems are addressed at different levels of explanation. Levels of explanation are well illustrated by this volume. Most of the other articles address the problem of the control of violence and aggression at the *individual* level (the biological, behavioral, and emotional states of the individuals), seeking answers to the question, "why does an individual behave violently, and what can be done to or with individuals to ensure that violent behavior does not recur?" Yet, this is only one of at least three levels at which these phenomena are to be explained.

Scholars have identified the level of explanation problem in a variety of ways (for more extended discussion, see Short, 1985). Inkeles (1959) chastened sociologists for failing to take into account individual characteristics when applying the "sociological stimulus-response" equation of behavioral response to social conditions. This sociological, macrolevel paradigm inquires typically as to the characteristics of cultures (including subcultures) and social systems which explain different *rates* of behavior, e.g., types of violence. Nearly 20 years ago I suggested the addition to this equation, also, of a third level, viz., *group process*. I did so as a result of studies of delinquent gangs in Chicago, in which we found certain mechanisms of group process to be important in explaining the occurrence of delinquent episodes—including violent episodes (see Short, 1965; Short & Strodtbeck, 1965). More abstractly, Albert Cohen and I called for attention to what we called the microsociological level of explanation (1971). We used as examples some of the gang research, but we also drew attention to work on "violence among intimates," such as that referred to above, and to such phenomena as "victim-precipitated homicide" (Wolfgang, 1957). This level of explanation—more properly the microlevel than the microsociological, since other social science disciplines are also concerned with it—inquires as to processes by which ongoing interaction produces particular behavioral outcomes. The microlevel seeks explanation of behavior in terms of the history of particular events rather than of characteristics of individuals, cultures, or social systems.

The point, so far as social control is concerned, is that levels of explanation immeasurably complicate efforts both to understand and to control human behavior. Controls operating at one level—or intended to do so—necessarily operate *in the context* of other levels. Individuals interact with others and the outcome of such interaction is to some extent a function of the nature of that interaction. Particular behavior episodes are to some extent determined in the course of such interaction. Macrolevel phenomena, such as cultural values and location in social structures, set important constraints on the operation of individual and mi-

macrolevel processes. Social class position, race, and ethnicity, for example, may determine in large measure the range of choices available to individuals among economic and social opportunities (see Stinchcombe, 1975). The *interrelatedness* of causal processes—and therefore of controlling processes—thus is critical to understanding, as well as to a humane and more equitable balance between social order and human freedom.

Social control thus extends beyond technique, for it involves the control of technique by those with the power to determine who shall be controlled, for what types of behavior, and toward what end. Social control may involve all levels of explanation, as well as any technique or program based on a given level of explanation. At times it may also involve the application of technique in the absence of explanatory knowledge.

VIII. SOME MACROLEVEL CONSIDERATIONS FOR THE FUTURE

Shelley (1981) notes that, as the forces of modernization have swept across the world, patterns of crime have changed. Industrialization and mass migration to urban centers disrupt traditional family and other institutions of social control. As this happens, violence typically increases, followed by decline, as new forms of control are institutionalized. The ascendancy of secular over traditional values and the pecuniary nexus of modern societies combined to make economic crimes a hallmark of modern societies. Institutions of civility are established, raising expectations of civil conduct between strangers as well as between intimates.

Were this the entire story, however, we should expect to find violence on the decline, as modernization extends its reach throughout the world. Clearly this is not the case, for either interpersonal or collective forms of violence. To be sure, “new” forms of violence have been “discovered” (rape, child abuse, battered women, as discussed above), and observed increases of these based on new and more effective reporting systems contribute to the appearance of rising levels of at least these forms of official violence. In any case, it is clear that levels of individual and collective violence are high in many parts of the world (see Gurr, 1980; Radzinowicz & King, 1977). Why should this be?

A possible reason is to be found in macrolevel forces operating on a global basis. Catton (1980) and others advance the thesis that the carrying capacity of the earth (in ecological terms) has been exceeded by the

advance of civilization, thus giving rise to increasing competition among nations, communities, and individuals. Though the thesis is controversial, there can be no doubt that the earth's natural resources have been precipitously (in geological time) drawn down, far beyond the capacity for their renewal. Catton poses the problem of the consequences for social order of this situation. He is not optimistic about the ability of democratic forms of government and other institutions to survive the competition for ever more scarce resources.

Elaborating this thesis, Catton (1983) draws upon collective behavior theory and research to present a picture of a violent world future which appears increasingly similar to the present. Constraints imposed by ecological scarcity resulting from exceeding the carrying capacity of the earth will grow more severe, he argues, as the draw-down of resources continues. Indeed, it is likely to be exacerbated as more nations become modernized and therefore become excessive users of resources. Ecological scarcity "presses people and nations toward zero-sum competition" (Catton, 1983, p. 3). While knowledge of ecological scarcity and widespread education as to the constraints it necessitates for human action may help to prevent disastrous conflict, the prospects for doing so are not bright. This is especially so because of differentials in power and wealth between and within nations. Problems of allocation of scarce resources on a worldwide scale, as well as among political constituencies and citizens already divided by social class, race, and ethnicity, are likely to intensify as a result of the deepening carrying-capacity deficit. Relationships between even the most friendly nations, as well as within the most open and democratic nations, will be severely strained. Catton (1983) predicts that, "both within and between nations, ecological scarcity will intensify the importance of . . . 'the fairness issue'" (p. 16).

The fairness issue is fundamental to all institutions, including those involved in social control. Rossi, Simpson, and Miller (1985), for example, report that those who believe in the fairness of U.S. institutions, generally, are less harsh in the punishments they feel persons convicted of crimes should receive. As one basis for trust in institutions, fairness is especially important in democratically conceived and governed societies (see Barber, 1983). It is widely perceived that Americans' confidence (trust) in their institutions has eroded in recent years, and there is considerable evidence to that effect (see Lipset & Schneider, 1983).

The theses of Shelley and Catton warrant careful consideration. Violent behavior is, of course, not uncommon among many relatively primitive societies. In such societies, however, violent behavior typically is carefully circumscribed by custom and tradition *based on years of accommodation to conditions imposed by limited resources* (see, e.g., Schwartz, 1972;

Edgerton, 1972; Langness, 1972; Spiro, 1972; Whiting, 1972). The changes brought about by modernization shift traditional forms of competition and conflict to other institutional areas, especially to economic competition, unbounded by tradition. Violence which breaks through institutionalized social controls related to civility and control of "antisocial" or "deviant" behavior also is unbounded by tradition, while forms of violence which are culturally mandated are likely to have been made illegal (e.g., the killing of traditional enemies).

Catton's thesis projects a future in which competition and conflict become so intense that the ability of traditional institutions to exercise social control is in jeopardy. He questions whether it will be possible to preserve the elements of civil society in the face of declining resources, and he implies the possible return to more violent forms of crime, unconstrained and unregulated by traditional institutional controls.

Recent changes in political life in the United States have added an element of volatility to the resolution of issues which may presage the sort of scenario sketched by Catton. More and more groups in this country have organized around polarized positions on narrowly defined issues. Examples come readily to mind: abortion, gun control, conservation, preservation, freedom to exploit natural resources, technological and environmental hazards, nuclear power, and world peace. By their very nature, these organizations promote polarization, both in support of and in opposition to, extreme—and often simplistic—positions regarding complex issues (see Douglas & Wildavsky, 1982).² Lacking the ameliorative mission and capacity of more broadly based, traditional institutions, such as political parties, labor unions, churches, and national and international religious bodies, they tend to promote confrontation, and at times conflict, rather than compromise.

The potential for fragmentation and conflict associated with these political processes should neither be overestimated nor ignored. It is possible, indeed, to construct more positive scenarios even with regard to the draw-down of the earth's resources (see, e.g., Simon & Kahn, 1984). In addition, special interest groups, such as those associated with single-issue organizations, present expanded opportunities for participatory democracy and for bringing more of the previously disenfranchised and the economically less favored into the mainstream of the political process. Interpersonal network data indicate that organizational membership supplements, rather than substitutes for, close personal relationships and other types of social participation, especially among

² Douglas and Wildavsky's (1982) extended essay discusses the "selection" of technological and environmental hazards and the nature of social reactions to them.

persons in more urban areas (see Fischer, 1982). To be sure, few of the organizations to which participants in network studies belong are single-issue or extremely narrowly focused. The findings are nevertheless encouraging.

Paradoxically, encouragement may also be found in the ominous nature of present and future macrolevel threats. O'Riordan (1983) notes that the character of environmental risks (not unlike that of ecological scarcity) is such that they have created a "distributional boomerang." While "the distribution of risk . . . normally falls disproportionately on the powerless and the poor," recently discovered environmental risks "seem so ubiquitous . . . that even the wealthy and the powerful are becoming anxious" (O'Riordan, 1983, p. 347).

While O'Riordan's assessment cries out for documentation and for exploration of its depth, it suggests the possibility that those who define a situation on the basis of very different assumptions and interests may nevertheless come together in the realization that they constitute a "community of fate," to use Carol Heimer's (1985) felicitous phrasing. As such, they may come to see the necessity of becoming mutually involved in the search for solutions to mutually threatening problems. While the possibility may seem utopian, the seriousness and the ubiquity of the threats (some would say the virtual certainty of ecological scarcity) offers the hope, if not the promise, of less divisive and conflictual collective responses than those envisioned by Catton. Cooperation and politically united effort toward the solution of common problems may become possible because they are necessary. This possibility is but an extension—albeit on an unprecedented scale—of the political principle that disparate and contending factions often unite against a common enemy.

IX. THE IRONIES OF SOCIAL CONTROL

Social control is not without ironies, e.g., as illustrated by the discussion above of "Authorities as Contributors to Deviance through Escalation, Nonenforcement and Covert Facilitation" (Marx, 1981). Other ironies abound as well. Traditions bind societies together (Shils, 1981) and contain and pattern much violent behavior. Yet the patriarchy supports "Violence Against Wives" (Dobash and Dobash, 1979). Enlightenment traditions helped to deliver children from much brutality, abandonment, and infanticide, yet controversy continues as to values lost in that process, and much violence against children remains unaccounted for the uncontrolled (see Aries, 1962; Empey, 1982). Primary groups pro-

mote both civility and violence through socialization processes. They are also the locus of the most violent as well as the most loving behaviors (see Goode, 1970). Lofty institutional goals become subverted by managerial and professional self-interest. Institutions which punish the violent are themselves violent, and they export violence back into the communities they are designed to protect (see Ball-Rokeach & Short, 1985). Technical achievements designed to protect and enhance life threaten basic values of freedom and even survival. The ironies are these and many more. Things are seldom as simple and straightforward as they seem or as we might wish them to be.

X. CONCLUSION

Social control perspectives, like levels of explanation, have consequences for how problems are defined and what is likely to be done about them. If violence is defined as a problem residing within *individuals*, for example, other levels of explanation and amelioration may be neglected, if perceived at all. Worse still, serious social implications of control measures based on one level of explanation, or a combination of levels, may be neglected. The technologies of behavior control and of controls over moods, emotions, and thoughts are both attractive and chilling—attractive because they offer relief from age-old maladies, chilling as incorporated in the Orwellian vision and because we have seen them abused and distorted to political ends.

Caplan and Nelson (1973) note that “person-blame” interpretations of social problems may “offer a convenient apology for freeing the government and primary cultural institutions from blame for the problem” (p. 201). Whether or not “blame” is a proper scientific concept, person-centered explanations serve to legitimate person-change rather than system-change. Programs aimed at controlling “troublesome” segments of the population thus may be legitimated by political motivations. Social control perspectives alert us to these potentials. They should also alert us to political and other processes through which the technologies of control may themselves be controlled in the common interest.

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